



MAHATMA GANDHI UNIVERSITY

**INTERNAL QUALITY ASSURANCE CELL
PRIYA DARSINI HILLS PO, KOTTAYAM, KERALA**

Annual Quality Assurance Report

[2016-17]

Submitted to the
**National Assessment and Accreditation Council
(NAAC)**

Part – A

1. Details of the Institution

1.1 Name of the Institution

Mahatma Gandhi University

1.2 Address Line 1

Priyadarsini Hills P O

Address Line 2

Athirampuzha

City/Town

Kottayam

State

Kerala

Pin Code

686560

Institution e-mail address

registrar@mgu.ac.in

Contact Nos.

+914812731001, +914812731007

Name of the Head of the Institution:

Dr.Babu Sebastian

Tel. No. with STD Code:

+914812731001

Mobile:

+91 9447128373

Name of the IQAC Co-ordinator:

Dr A.M Thomas

Mobile:

9495108959

IQAC e-mail address:

iqac@mgu.ac.in

1.3 NAAC Track ID

KLMGU 68656

1.4 NAAC Executive Committee No. & Date:

EC/54/RAR/121 dtd 08/01/2011

1.5 Website address:

www.mgu.ac.in

Web-link of the AQAR:

www.mgu.ac.in

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	B+		2003	15 th September, 2008
2	2 nd Cycle	B	2.90	2011	6 th Jan 2016
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC: DD/MM/YYYY

03/11/2009

1.8 AQAR for the year (*for example 2010-11*)

2016-2017

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

- AQAR 2014-15 submitted to NAAC on 10-08-2016
- AQAR 2010-11 submitted to NAAC on 08-08-2016
- AQAR 2011-12 submitted to NAAC on 14-01-2016
- AQAR 2012-13 submitted to NAAC on 10-02-2016
- AQAR 2013-14 submitted to NAAC on 03-03-2016
- AQAR 2015-16 submitted to NAAC on 10-11-2016
- AQAR 2016-17 submitted to NAAC on 10-10-2017

1.10 Institutional Status

University

State

Central

Deemed

Private

Affiliated College

Yes

No

Constituent College

Yes

No

Autonomous college of UGC

Yes

No

Regulatory Agency approved Institution

Yes

No

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution: Co-education Men Women

Urban Rural Tribal

Financial Status: Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Fully Self-financing

1.11 Type of Faculty/Programme

Arts Science Commerce Law Management

PEI (Phys Edu) TEI (Edu) Engineering Health Science

Others (Specify)

Engineering & Technology, Technology & Applied Sciences, Environmental and Applied Sciences, Behavioural Sciences, Paramedical Sciences.

1.12 Name of the Affiliating University (*for the Colleges*)

NA

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc. - NA

Autonomy by State/Central Govt. / University - NA

University with Potential for Excellence UGC-CPE

DST Star Scheme UGC-CE

UGC-Special Assistance Programme DST-FIST

UGC-Innovative PG programmes Any other (*Specify*)

UGC-COP Programmes

1.14 Inter University Centres Established in the Year 2016-17

No Inter University Centre was established in the Year 2016-17

2. IQAC Composition and Activities

IQAC

2.1 No. of Teachers

2.2 No. of Administrative/Technical staff

2.3 No. of students

2.4 No. of Management representatives

2.5 No. of Alumni

2.6 No. of any other stakeholder and

Community representatives

2.7 No. of Employers/ Industrialists

2.8 No. of other External Experts

2.9 Total No. of members

2.10 No. of IQAC meetings held

2.11 No. of meetings with various stakeholders:

No.

Faculty

Non-Teaching Staff /Students

Alumni

Others

2.12 Has IQAC received any funding from UGC during the year?

Yes No

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

- The Institute for Contemporary Chinese Studies organized a major International Conference on the theme “India, China and The New Silk Road Initiatives: Challenges and Opportunities” jointly with the School of International Relations and Politics during 11-12 November 2016.
- The ICCS Organised an international conference on **Understanding Contemporary India** in association with the Rajiv Gandhi Chair for Public Policy Studies, Mahatma Gandhi University during 14-15, January 2016
- Symposium on “Political Transformation and Development in China and India” on Thursday, 18 August 2016.

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National

Institution Level

(ii) Themes

- *JAIVAM*- The University has implemented *JAIVAM 2017*, a public education programme to spread organic farming in Kottayam District. It is commendable that the University has published a Handbook on organic farming and has distributed it among five lakh households. Around ten thousand National Service Scheme volunteers were selected to propagate the boons of organic farming among the public.
- Organized as Special Talk and Interaction on Research and Career Opportunities in Germany 6th February 2017.
- Two Weeks Capacity Building workshop on E-learning and E-Content Development 16-30 Jan 2017 , In association with DCDC and SOCS.
- Special Talk and Interaction on Fulbright Fellowships and Research Opportunities in US by Maya Sundararajan (US Consulate General, Chennai) 27 February 2017.
- Fellowship offered by Government of Australia for Masters, Ph.D, Post Doctoral and Executive Levels in Australian Universities by K.S. Beena (Professor, CUSAT) 24 May 2017
- Book Published titled “Instructional Design for short learning Object” published in in 24th May 2017.

- School of Computer Sciences has been organizing an annual technical meet “Interface” since 1996 and publishing an annual technical publication “IT Glimpse” since 1999. The three days programme is completely organized by the students with ample support and guidance from alumni and faculty members. The event aims at bringing together computer science students from various universities and institutions and to provide a common platform to share their talents by means of a series of technically challenging competitions like Paper Presentations, Technical Quiz, Programming, N/W gaming, Troubleshooting and so on.

2.14 Significant activities and contributions made by IQAC

- ✓ Honouring PhD scholars- The IQAC conducted a programme on 0108.2017 honour all those who had been awarded PhD degree during 2016-17.
- ✓ The importance of technology transfer to industry has been appreciated by the IQAC and it has been decided to explore participation with industry on this front
- ✓ On the job training programmes for Assistants during May-June 2016
- ✓ Considerable advance has been made by the University in the execution of MOUs with research
- ✓ Internal Quality Assurance Cell (IQAC), Mahatma Gandhi University and is hosting a "Publisher-Academy Interface Meeting" on Thursday, 17th of August 2017,2 PM. The title of the talk is "Scholarly Publishing- Elsevier Platforms and Peer Reviewing" by Dr. Greeshma Nair (Publisher Elsevier, Amsterdam)

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year:

<p>Plan of action Placement cell</p>	<p>Achievements</p> <ul style="list-style-type: none"> • It was planned to enhance activities of the placement cell and to conduct skill development programmes in a regular manner and to give short add on courses on different softwares and scientific and computational tools and to continue the practice of offering remedial coaching/bridge courses to MSc/M.Tech students in specialized areas/computing tools
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<p>Consultancy Programmes</p> <p>MOOC</p>	<ul style="list-style-type: none"> • It has been decided that each School would initiate consultancy programmes. • The importance of technology transfer to industry has been appreciated by the IQAC and it has been decided to explore participation with industry on this front. • The IIUCNN has introduced a MOOC on ‘Global Understanding’ as a credit open course in collaboration with North Carolina State A & T University. The Centre is also developing MOOC on Introduction to Nanoscience and Nanotechnology and on Analytical Instrumentation Technique. • The School of Pure and Applied Physics has developed the conceptual outline of a MOOC based on Astronomy. • The School of Gandhian Thought & Development Studies has developed an online certificate programme in ‘Gandhian & Peace Studies’. • The School of Tourism Studies has started a Diploma Course of 6 months duration on ‘Tourism Destination Services Management’. • The School of Management & Business Studies has initiated action for starting MOOC course on General Management & Functional areas. • The Department of Life Long Learning has started an online certificate course in Management of Learning Disabilities.
<p>Skill up-gradation of students and enhancement of employability.</p>	<p>Introduction of add-on programmes under Acquired Skill Acquisition Programme (ASAP) in various Schools/Centres:</p> <ul style="list-style-type: none"> • The School of Environmental Sciences has started add – on courses in – a) Environment & Sustainable Development b) Health, Sanitation and Environment, to all Post Graduate students in the University Campus.

	<ul style="list-style-type: none"> • The School of Social Sciences has introduced field experience programme in Archaeology to students especially at the Pattanam archaeological site. • The School of Computer Sciences has prepared a proposal for a Software Development Centre for students to acquire work experience. The School has also introduced add-on course as part of Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, and Government of India).
<p>Improvement in the performance of the University on the Research & Extension front.</p>	<ul style="list-style-type: none"> • Considerable advance has been made by the University in the execution of MOUs with research institutions of international standing. During the 12th Plan period tremendous progress has been made in securing extension projects under the auspices of institutions like UGC, FIST, DST, DRS, ISRO, COSIT, CSIR, DARD, STEC, ICMR, BARC etc. MoUs have been entered into with Max Planck Institute of Technology, Germany; CALTEC, USA; University of Toronto, Canada; Institute for Political Science, Rennes, France among several others during the period providing a boost to the performance of the University on the Research and Extension front.
<p>E- learning Initiatives</p>	<ul style="list-style-type: none"> • The University has won the award for the Best Institution for E-Learning Facility instituted by the Government of Kerala. • The Department of Printing and Publishing forays into Knowledge Book Publishing during the period.

<p>International Collaborations and Linkages</p>	<ul style="list-style-type: none"> • The School of Environmental Sciences (SES) has initiated a new linkage with Bournemouth University, UK. • SES has ongoing linkage with: <ul style="list-style-type: none"> a) National Centre for Antarctic and Ocean Research (NCAOR, Goa) b) California Institute of Technology, USA on Sustainable Sanitation. • The School of Computer Sciences has established linkage with: <ul style="list-style-type: none"> a) IIT, Hyderabad b) VM Ware, Bangalore; CDAC c) Department of Computational Biology, University of Kerala d) Centre for Artificial Intelligence and Robotics (CAIR), Bangalore.
<p>Infrastructure development – tapping RUSA funds</p>	<p>An amount of Rs.20 cr was sanctioned under RUSA to the University as infrastructure grant to carry out a spate of activities spread over infrastructure, renovation and purchase of equipment, computer and books.</p> <ul style="list-style-type: none"> • A Student Amenity & Incubation Centre, setting up wi-fi enabled campus, campus beautification including construction of ramp for the differently abled are bestowed special attention for an amount of Rs.7 cr • RUSA funds to the tune of Rs.7cr was sanctioned for renovation activities including setting up of a Solar Power Plant System and enabling digital facility in the library. • RUSA funds to the tune of Rs.6 cr was sanctioned for purchase of equipment, computer and books; setting up of a Digital Content Creation Lab & Music Research Centre.

2.16 Whether the AQAR was placed in statutory body Yes

Management Syndicate Any other body

Provide the details of the action taken.

Approved by Hon'ble Vice Chancellor , exercising power u/s 3.10(17) of MGU Act, 1985 dated on 10.10.2017



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Annual Quality Assurance Report

[2016-17]

Submitted to the
National Assessment and Accreditation Council (NAAC)

The Annual Quality Assurance Report (AQAR) of the IQAC for the year 2016-17

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
Ph.D	54	8		-
PG	32	3		-
UG	3	-		-
PG Diploma	2	2		-
Advanced Diploma	20	-		-
Diploma	-	-		-
Certificate	12	-		-
Integrated	6			
Others (M.Phil)	3	-		-
Total	5	-		-
	137	13		-

Interdisciplinary				
Innovative				

1.2 (i) Flexibility of the Curriculum: CBCS

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	179
Trimester	1
Annual	14

1.3 Feedback from stakeholders* Alumni Yes Parents Yes Teachers Yes
 Students Yes
 (On all aspects)

Mode of feedback : Online ✓ Manual ✓ Co-operating schools (for PEI)

**Please provide an analysis of the feedback in the Annexure*

The University has a formal mechanism to collect feedback on curriculum from students. The general format of the feedback forms is provided by the IQAC of the University. Feedback was also collected manually at the end of the Semester through a Feedback Proforma. The responses were analysed and discussed by Faculty. The Schools regularly collect feedback during Alumni meets and PTA meetings. Major remarks pointed out the fact that curriculum provides a broad coverage of the subject area providing in depth knowledge in the subject. Feedbacks from the various stakeholders are used in the regular updation of syllabi and up to date choice of electives, meeting the demands of the industry

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

Due to the rapid developments in the subject area the Schools need to maintain the syllabus of the programmes offered up to date and meeting the demands of the industry as well as academia. To achieve this the Schools have made the best use of the provision to update the contents of individual courses in every semester. Syllabi is being constantly updated each semester subject to the regulations of the Board Studies and the recommendations of the Faculty Council. The latest knowledge in a given field is thus incorporated into the syllabi. Also, Ph.D Programme syllabus for coursework was bestowed special attention for revision. All the P.G and MPhil. Programmes offered by the Schools follow the revised syllabus in the academic year 2016-17. The revision allowed inclusion of more practicals and theory content relevant in the areas concerned. In the third and fourth semester of MSc. Disability studies and Rehabilitation sciences course, a new elective in autism was designed and offered for the students in the School of Behavioural Sciences. The revision of syllabi of M Sc/ M Tech /MPhil programmes of the School was done as per Revised CSS Regulations 2016.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

1. Business Innovation and Incubation Centre (BIIC) was established in 2016. The main aim of BIIC is to kindle the entrepreneurial spirit of youth and provide customized support to early stage business ideas with high growth potential amply supported by a patent cell. It also aims to become a hub for innovation activities facilitating and guiding development of ideas into innovative applications that can benefit society directly.
2. Inter University Centre for Organic Farming and Sustainable Agriculture(IUCOFSA) was established in 2016. This centre has been established to encourage and promote development of organic farming and sustainable agriculture in the country.

Criterion – II

2. Teaching, Learning and Evaluation faculty

2.1 Total No. of permanent

Total	Asst. Professors	Associate Professors	Professors	Others
98	46	30	22	369

2.2 No. of permanent faculty with Ph.D.

96

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Total	
R	V	R	V	R	V	R	V
1	20	NIL	12	NIL	10	1	42

2.4 No. of Guest and Visiting faculty and Temporary faculty

236

80

82

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International Level	National Level	State Level
Attended	90	150	49

Presented	156	137	41
Resource Persons	37	74	40

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- ✓ Participatory learning programme
- ✓ Supported e-learning
- ✓ Supported environmental case studies
- ✓ Project simulation methods – Co learning
- ✓ Research awareness to newly admitted students. Interactive sessions with well placed alumni were organised

School of International Relations and Politics has adopted modern technologies in imparting instruction to the students. These include the use of ICT, maps, documentaries, etc.

School of Tourism Studies has adopted the following noteworthy innovative techniques

- Classrooms' efficiency is enhanced with use of Audio Visual Aids like LCD Projectors, Speakers, portable mikes and white boards
- Assignments- Seminars- Tutorial- e learning- role plays in language classes (English and French), Group Discussion- Mock interviews
- Semester Plan for overall academic planning and timely execution
- Destination Visits and National Tours are conducted frequently
- Group projects with a view to enhance practical knowledge and social impacts.
- Student Newsletter titled Hue
- Use of ODLL Language learning Software in Language Lab to enhance Communication skills
- SPSS Software for tourism research purpose used in the SPSS Lab
- Two months internship training in collaboration with the industry:- constant validity check using DPR (Daily Progress Report), IEF (Internship Evaluation Form) and Internship certificate
- WIFI connectivity in the School to enhance e- learning
- Lesson Plan system for timely and effective execution of each course

- Use of tourism educational aids and DVDs from INSIGHT MEDIA, New York
- Remedial class for the weaklings.
- In semester examinations are conducted to enhance student learning.
- Women's day was celebrated on March 8 2017. All the women students and women teaching and non-teaching staff were greeted on the occasions. The boys students wish them and offered them small gifts.
- Celebrated annual day, FELIZE and Luminary competitions on 21st& 22nd June 2017. Best student of the outgoing batch is selected as luminary of the year 2017.

The Schools have sustained innovative, transparent and rigorous internal tools to weigh up the cognitive faculty of students and research scholars as well as to determine the depth of knowledge, intelligence and articulation they have gained over time. Periodic review sessions are put in place, group-wise and individual wise, to understand the levels of disparity, if any, and to recommend remedial means thereof. The Schools have developed a learner- friendly, need- based instructional/learning system to endow the students and research scholars with adequate skills and capacity to meet the emerging challenges. The instructional pattern, apart from its information-based mode, inculcates values of theory-embeddedness, self-reflexivity and policy-alternative thinking. The learner-friendly instructional system seeks to foster cognitive-analytical skill of students and, wherever necessary, provides space for the empowerment of the disadvantaged in the learning process through informal counselling and tutorial interface. While classroom lectures continue to be an essential prerequisite for the imparting of knowledge, periodic seminars, book/article review sections and group interface provide the necessary intellectual climate for the learning and research in the Schools. This is supplemented by Assignments, Seminars, Tutorials and E-learning. The Schools have also introduced a variety of audio-visual information systems such for lectures and seminars. Through Seminars, Group Discussions, Individual Assessment etc, self learning activity is encouraged. Case study, live projects and assignments are a regular tool in teaching subjects like Management Studies. Remedial coaching is also arranged for students, who are weak to improve their academic standards. Modern technologies like computers, internet, LCD projectors etc are used in the class rooms and these enrich the learning experience of students. The Erudite Scholar in Residence Programme introduced by the Kerala State Higher Education Council has enabled student interaction with Nobel laureates and outstanding academics and has

proved to be a unique learning experience for the students which have also been of much inspiration to them.

2.7 Total No. of actual teaching days during this academic year : 202

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding

Double Valuation, Online Internal exam through EDMODO, Open Book Examination, etc have been introduced during the period. Machine interface exam has also been introduced for the qualitative improvement of listening skills of students.

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

130	74	49
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2.10 Average percentage of attendance of students : 90%

2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction	I	II	III	Pass %
MS	668	325	906	303	303	85%
M.Phil						
MA						
Ph.D Course						
Work						

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

The IQAC conducts periodic meetings to monitor the academic programmes of various Schools/Departments and makes suggestions and recommendations in the Department Council. The IQAC team prepares strategies at Schools/Department level for qualitative teaching and research. Continuous Evaluation of students through internal tests, assignments and seminars, direct question answer sessions are made. Periodic academic audit and assessment based on PBAS

furnished by the teaching faculty is carried out by the IQAC and evaluation reports are sent to each Head of the Department/School for compliance, remedial coaching, tutorials, subject familiarization through videos, visiting resource persons and special lectures and expert lectures from industry. The IQAC prepares a plan of action for each semester at the commencement of the semester and ensures that all activities get completed as per schedule. The schedule is also given to the students so that they can plan their studies accordingly. Orientation programmes and counselling are made strict in the learner friendly atmosphere. The IQAC also collects feedback from students and gives valuable suggestions and guidelines as and when needed. IQAC also improves faculty motivation for competence and promotes adoption of innovative teaching learning strategies. As directed by IQAC team IUCCN introduced Surprise test, flipped classroom concept, a workshop conducted by IQAC in February 2016 as a part of faculty improvement programme. The Quality Cell at the departmental level prepares the roadmap of qualitative teaching and research.

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	19
UGC – Faculty Improvement Programme	11
HRD programmes	05
Orientation programmes	23
Faculty exchange programme	02
Staff training conducted by the university	40
Staff training conducted by other institutions	29
Summer / Winter schools, Workshops, etc.	41
Others	11

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily

Administrative Staff	1167	51	120	31
Technical Staff	429	36	12	34

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- The IQAC has decided to institute three Best Researcher Awards in Science, Social Science, and Language & Literature year wise in the University.
- The IQAC has decided to institute Awards for the best patent, best Research publication, best Research Guide, best Thesis etc to promote an amicable environment congenial to the young researchers of the University.
- It has been decided to set up a patent cell and technology transfer unit for ushering in a patent culture in the University.
- The IQAC has decided to formulate norms and criteria for the Best School/Centre award implemented in the University.
- Gives importance to Research and dissemination of research findings by encouraging faculty and research scholars to contribute articles in different journals and through presenting papers in the National and International Seminars, Conferences.etc.
- It has been decided that each School would initiate consultancy programmes.
- The importance of technology transfer to industry has been appreciated by the IQAC and it has been decided to explore participation with industry on this front.
- IQAC has taken steps to organize workshops/seminars/training programs /invited talks in the frontier areas of the subjects concerned there by giving the students, an opportunity to understand the current thrust areas and get in to research programs. Many of our students have benefited through these activities. Students are facilitated on doing summer projects outside the alma mater under the Aspire scheme of Govt. of Kerala to enable them to gain a broader exposure to research. Several of the faculty gives scientific talks at nearby colleges and schools and also over the IR and visual media
- The IQAC has conducted internal orientation exercises. Faculty members of the Schools have shown enthusiasm in strengthening the academic activities. Research proposals of all programmes submitted to the school are jointly discussed and suggestions are incorporated

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	26	21	66	28
Outlay in Rs. Lakhs	300.00	800.55	46.65	110.00

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	8	3		
Outlay in Rs. Lakhs	14.00	25.00		

3.4 Details on research publications

	International	National	Others
Peer Review Journals	385	85	49
Non-Peer Review Journals	4	22	
e-Journals	9		
Conference proceedings	150	72	

3.5 Details on Impact factor of publications:

Range Average Citations

Average h-index

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisation

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2 to 5 years	UGC,DoECC,DST, DBT,ICSSR,CSIR, KSCSTE	24,65,92,498	8,06,13,869

Minor Projects	1 to 1.5 years	UGC,KSHEC	4,10,000.	88,000
Interdisciplinary Projects	5 years	DBT-MSUB	3,95,07,840	32,52,151
Industry sponsored	2 to 3 years	Arjuna Natural Extracts Ltd,ISRO,Coconut Development Board	68,95,160	15,75,250
Projects sponsored by the University/ College				
Students research projects (other than compulsory by the University)	3 years	KSCSTE	28,96,000	6,83,414
Any other(Specify)				NIL
Total			29,63,01,498	8,62,12,684

3.7 No. of books published i) With ISBN No. Chapters in Edited **Books**

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP

2

CAS

-FIST

3

21

23

DPE

2

DBT Scheme/funds

1

3.9 For colleges

Autonomy

CPE

DBT Star Scheme

INSPIRE

CE

Any Other (specify)

3.10 Revenue generated through consultancy

19 lakhs

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	14	17	5	12	
Sponsoring agencies	University	SERB DST ICHR ICSSR		University	

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations

International

National

Any other:

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs:

Other funds for research from agencies in lakhs

Rs 12,57.55,000/-

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	
	Granted	2
International	Applied	
	Granted	4
Commercialised	Applied	
	Granted	

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
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22	7	13	2			
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3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them

95
411

3.19 No. of Ph.D. awarded by faculty from the Institution

88

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled +existing ones)

JRF	85	SRF	23	Project Fellows	14	Any
other	30					

3.21 No. of students Participated in NSS events: 115

3.22 No. of students participated in NCC events:

3.23 No. of Awards won in NSS:

University level	20	State level	1	National level	
International level					

3.24 No. of Awards won in NCC:

3.25 No. of Extension activities organized

University forum	1
NSS	20
Any other	20

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

The School of Tourism Studies, Department of Life Long Learning and Extension, Department of Students Services, National Student Services and School of Behavioural Sciences, School of Biosciences, School of Indian Legal Thought, School of Social Sciences and School of Environmental Sciences have organized extension activities

envisaged to benefit the rural population of the state with special importance to the areas under the jurisdiction of the University.

School of Behavioural Sciences.

- Organized a number of training programmes for different sectors of the society to empower them in the area of disability prevention,detection and rehabilitation.
- Organized seminars and workshops in the area of mental health and disability and facilitated active participation of students from Nursing ,Physiotherapy,Medicine,Education and other allied disciplines to have a team approach in rehabilitation
- Organized and conducted home visits to identify the problems of persons with disabilities and their care givers in the actual family situation
- Organized and conducted debates and discussions in connection with the observance of various relevant national and international days of importance.
- Field visits to palliative care centres, special schools and various rehabilitation centres were arranged to enhance knowledge and develop positive attitude for working among persons with various disabilities

School of Indian Legal Thought

- Organized and conducted Ambedkar Memorial Lecture :by Prof Mohan Gopal
- Published The Journal of Indian Legal Thought 2017 (11th Volume)

School of Social Sciences

- Organized and conducted One Day in the Campus to inculcate an aptitude for science among school children, 'one day in the campus' programme was organized which include workshop and interaction with an eminent scholar. Students from nearby government schools are usually invited for this programme.

School of Computer Sciences

- Interface 2016- an annual IT Meet (IT competitions) was organized by the School provided a platform for students in Computer Science and Technology from various Universities and Colleges in South India to showcase their technical talents and also served as a forum for information interchange in the field. Remedial classes were organized for the second semester M Sc and M Tech batches during vacation

School of Tourism Studies

- Faculty members were engaged in dissemination of knowledge by handling regular columns in national newspapers (Deccan Chronicle, Kerala editions) and wrote 20articles

School of Pure and Applied Physics

- Swach BharathAbhiyan was celebrated
- Visited Najeevan trust a house for mentally ill-
- Donated money to the charitable institution 'Navjeevan Trust'
- Donated airport chairs to the Cancer Ward of the Government Medical College- Kottayam

School of Bio Sciences

- Conducted food fest in the Campus

Inter University Instrumentation Centre

The following were organised and conducted

- Water pollution monitoring
- Air pollution monitoring
- Advanced oxidation processes
- Environmental and biological application of mass spectrometry
- Nanoscience and nanotechnology
- Membrane science and technology

Advanced Centre of Environmental Studies and Sustainable Development

- *Climate change and adaptations* – Community awareness programme was conducted
- *Conservation of Western Ghat* – Interaction with the stakeholder groups was made
- *Water and Energy conservation* – Community based programme was organised

Inter University Centre for Disability Studies

- Conducted early intervention to children with disabilities. -Speech therapy, Remedial coaching, Counselling services, Audiological evaluation

- Awareness classes conducted by the faculty members for Govt. & Non Governmental agencies ,College students /School students

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Seminar Halls	30	2		32
No. of important equipments purchased (\geq 1-0 lakh) during the current year.	65	6	UGC XI PLAN, STATE, UNTY FUND	71
Value of the equipment purchased during the year (Rs. in Lakhs)	129 lakhs			
Others				

4.2 Computerization of administration and library

- **Computerization of University Administration:** The University administration is set to introduce e-governance in administration and necessary infrastructure is being put in place .The attempt is to make the University office paperless.Necessary training in computerization is being given to the administrative personnel prior to the introduction of e -governance.
- **Computerization of University Library:** The inhouse management of the University library services are computerized using Open Source Library Management Software KOHA.There are many desktop computers in the library, which can be utilized by the students for preparing dissertations and for study purposes.Internet facility is also available.
 - ✓ Accessibility of new e- journals –The library provides access to resources including e journal and databases under the UGC_INFONET digital library consortium (E-Sodhsindhu) e-journal archives and e- books procured on perpetual access basis, annual subscription basis and digital archives of

University PhD Thesis. All the faculty members of the centre suggest essential books and periodicals to be procured regularly.

- ✓ According to the latest report, the University is ranked 29th among 250 universities under the UGC_INFONET digital library consortium.
- ✓ E-books from Oxford scholarship online, Taylor and Francis group, Malayalam e-book collection from DC Books.
- ✓ E- Journal archives from Camebridge University Press, Sage publications and Springer LLink Publications.
- ✓ Database like PROQUEST, LISA, 22000 ejournal from j GATE Port.
- ✓ Library has web enabled OPAC (online public access catalogue) <http://mgucat.mgu.ac.in>).
- ✓ E resources available in the university are extended to outside departments and study centres through VPN (virtual private network) technology.
- ✓ Library is managing its website(www.library.mgu.ac.in) webserver in the university library

The library follows the following methods for purchasing new titles or journals:

- ✓ Library procures the books which are duly recommended by teachers' research scholars and students.
- ✓ Library procures books on approval from various publishers and vendors considering the courses available in our colleges. The teachers are invited to approve the books by filling up the Requisition Form . Thus the approved books are procured.
- ✓ Teachers visit Book Exhibitions to select the required books
- ✓ **Steps to improve the functioning of Library:** The faculty members of various schools and centres meet to discuss various issues related to improvement of Library and advice suitable solutions for better functioning. They also meet regularly to discuss and finalize proposed policies, budget, specific issues and suggestions to the departmental library.
- ✓ **Open Access Availability of Theses:** Open Access Availability of Theses of doctoral degrees awarded by the University has been established. (www.mgutheses.org). Digital storage of theses and research publications is available in the University Library

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	1,80,619	10,95,31288	3896	3506145	184515	113,037433
Reference Books	17526	9074660				
e-Books	4453	66549			4453	66549
Journals	1097	18210446			1097	18210446
e-Journals						
Digital Database	55	4528089			55	4528089
CD & Video	1658	443567			1658	443567
Others (specify)	15542	1389225			15542	1389225

- ✓ **Every school in the University has a computerized library and Infonet lab for students and research scholars**

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	1075	82	Internet Connection of 100 Mbps bandwidth is available throughout the campus	24	21	61	52	46
Added	140					5	5	7
Total				24	21	66	57	53

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (Networking, e-Governance etc.)

- Computer and Internet facility has already been made available in all Schools/Centres of the University. High speed internet facility of 100mbps bandwidth is available in the University Campus. The University conducts training and orientation programmes in advanced computer and software management by experts for the benefit of students and teachers.

- The departments have corporate license software with the Microsoft. All the software loaded has been licensed with different agencies.

Name of the software	Licensed by
Microsoft Windows	Microsoft Corporation - Corporate version
Microsoft Office	Microsoft Corporation – Corporate Version
LINUX	Open source software
Anti - virus software	Purchased

- Scanner, print facility and Xerox facilities are available to the students and the faculty.
- The departmental libraries are equipped to enable access to e-resources.
- **Upgradation of IT infrastructure:** The University undertakes upgradation of computer systems on a periodic basis and also when the necessity so arises. The softwares, printers, scanners are upgraded frequently especially when newer versions are released.
- **ICT enabled teaching- learning process:** All departments are equipped with projector and desktops with internet facility .The ICT facility is used by students for seminar presentation, assignments, project work. An independent learning environment is ensured through access to various open e-resources and the assignments given to students make it necessary for them to tap these e-resources to complete their assignments. The computer aided teaching learning process is constantly improved upon based on inputs and feed back from students.
- **Training Programmes to teachers and students –** The University Library conducts orientation programmes at regular intervals for new batches of students, research scholars and faculty members for using UGC – Inflibnet services and digital consortium encompassing thesis in digital format. The library also provides personalised information services to the students, faculties and research scholars.

4.6 Amount spent on maintenance in lakhs:

i) ICT	3.23
ii) Campus Infrastructure and facilities	4.05
iii) Equipments	1.49
iv) Others	0.77

Total : 23.01 Lakhs

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- The IQAC monitors the activities of the Students Grievance Redressal Cell.
- Personal Accident Insurance Scheme and Financial Aid for serious illness are provided to students by the Department of Student Services on the recommendations of the IQAC.
- Grace Marks are awarded to students for their outstanding performance in sports and in cultural activities.
- The Department of Students Services conducts youth festivals every year and the University also ensures the participation of students in National and Inter University competitions.
- Research fellowships are provided to students for pursuing doctoral studies in various research centres of the University.
- The Career Guidance Bureau provides training to students for GATE/NET/SET examinations.
- The students are encouraged to participate in seminars, conferences, symposia, workshops etc. to improve their exposure and for overall development of their intellectual abilities.
- **Students Mentoring** : The mentors counsel the students during the periodic reviews and they are encouraged to develop and channelize their skills by participating in conferences, seminars, workshops etc. Online mentoring is also facilitated by creating

group mails and every issue that needs attention is addressed by conducting meetings of staff and students. The mentors also arranged 'Erudite' lectures during the period.

5.2 Efforts made by the institution for tracking the progression

While at Schools, progression of students is regularly monitored. The faculty advisor assigned to each batch of students collects and files all personal and academic details of the entire batch of students. This enables the faculty member to keep a record of the previous academic record, personal background, current details, semester wise academic and co-curricular achievements of each student in a batch and helps to counsel and guide the ward in a more effective and fruitful manner. This produced a positive impact in the student teacher relationship and was reflected in the selection of electives, projects and in the overall performance of the students.

- Written and oral examinations are conducted to evaluate student progression to assess their qualitative improvement. Process-Monitoring through Seminars, assignments and minor projects, internal assessment, test papers, Assignment presentation and seminars, RTVW (Read, Think, Visualise, Write) Workshops and continuous feedbacks (*Direct Feedback and delayed feedback from students and faculty*).
- The faculty advisor assigned to each batch of students collects and files all personal and academic details of the entire batch. This enables the faculty member to maintain the previous academic record, personal background, current details, semester wise academic and co-curricular achievements of each student in a batch and helps to counsel and guide the student in a more effective and fruitful manner. This has produced a positive impact in the student teacher relationship which was reflected in the selection of electives, projects and in the overall performance of the students.
- Slow and advanced learners are identified through the internal evaluation. In addition to the regular working hours, extra time has been given to the students to use the laboratory facilities to enhance their knowledge in the subjects not included in the curriculum.
- Remedial courses are being conducted for the improvement of weaker students. For every batch during the 1st semester a 2-week programming session is given for improving the programming competency of the students.

- The status of the students is monitored by the alumni forum which is very active in updating career progress of the students who pass out. Alumni meetings & PTA meetings are organised. Social media was utilized to promote student and alumni gatherings and information sharing. WhatsApp groups created for students and alumni.
- Students who pass PG courses are motivated to enrol for Ph.D .Several students do part of their Ph.D programme abroad.Collaborations with foreign Universities enable students of this University to join collaborative programmes.Post Graduate students are encouraged to apply for several distinguished fellowships offered by Government of India and other foreign countries for joining doctoral programmes abroad.The University invites industries for campus recruitment for placement of its students.

Available support services to overseas students -

- International Hostel with international menu and dining facilities.
- Transport facilities for official visits to local area etc
- Special medical care is provided
- Registration of Visa at the time of arrival
- Visa extension if required for academic purpose
- No Objection Certificate at the time of leaving India after completion of course.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others (M.Phil)
-	1487	315	185

(b) No. of students outside the state

2

(c) No. of international students

8

Men

No	%
1996	27.85

Women

No	%
5171	72.15

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- The University has a career guidance cell which provides general awareness and coaching for UGC Net exam / PSC exam NET examination especially for SC, ST, OBC and other minorities. A faculty member is in charge of the Career Guidance Cell.
- The Career Guidance Cell conducts personality development classes and spoken English classes for the benefit of students.
- Introduced remedial coaching, competitive exam helpdesk like coaching for KTET and SET examinations and Language training, personality development.
- The University Library has sufficient books which serve as good reference material for students preparing for various competitive tests.
- The faculty members have provided guidance to students to take up IELTS, TOEFL, GRE and GMAT examinations.
- The University has a career guidance cell which provides general awareness and coaching for UGC Net exam / PSC exam NET examination especially for SC, ST, OBC and other minorities. A faculty member is in charge of the Career Guidance Cell.
- The Career Guidance Cell conducts personality development classes and spoken English classes for the benefit of students.
- Introduced remedial coaching, competitive exam helpdesk like coaching for KTET and SET examinations and Language training, personality development.
- The University Library has sufficient books which serve as good reference material for students preparing for various competitive tests.
- The faculty members have provided guidance to students to take up IELTS, TOEFL, GRE and GMAT examinations

No. of students beneficiaries

369

5.5 No. of students qualified in these examinations -Nil

NET SET/SLET GATE CAT

IAS/IPS etc State PSC UPSC Others

5.6 Details of student counselling and career guidance

- The University has a career guidance cell which provides general awareness and coaching for UGC Net exam / PSC exam NET examination especially for SC, ST, OBC and other minorities. A faculty member is in charge of the Career Guidance Cell.
- The Career Guidance Cell conducts personality development classes and spoken English classes for the benefit of students.
- The University Library has sufficient books which serve as good reference material for students preparing for various competitive tests.
- The Career Guidance Cell conducts personality development classes and spoken English classes for the benefit of students

No. of students benefitted

66

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
21	235	88	430

5.8 Details of gender sensitization programmes

- There is an active Women's Forum in the Campus which regularly conducts yoga, dance and music classes out of office hours in the campus
 - The International Women's Day was celebrated in the University by organizing seminars.
 - There are more women students than men at the PG/Ph.D level in the University.
 - Women students have secured most ranks in University Examinations than men.
 - There is a functional Anti Harrassment Cell in the University.
 - There are Anti Ragging Cells as also counseling centres in the departments
- tails of gender sensitization programmes

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level National level International level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Amount in lakhs
Financial support from institution	51	275
Financial support from government	656	217
Financial support from other sources	74	91
Number of students who received International/ National recognitions	05	

5.11 Student organised / initiatives

Fairs : State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students :53

Orukkam2017 initiated through NSS Campus unit to extend academic support to students from weaker sections residing in a neighbouring colony. The students of the department who are active NSS volunteers visited bedridden patients in low income group residing in the neighbouring panchayat and distributed food kit during Onam festival season

5.13 Major grievances of students (if any) redressed:

As per UGC direction dated 08-03-2016 and as per its Grievance Redressal Regulations 2012 the University had constituted a Grievance Redressal Committee on 07-06-2016 under the Chairmanship of Prof. P.S. Sukumaran, School of Behavioural Sciences of the University. The complaints, if any, received shall be transferred to the Committee for necessary considerations and redressal.

The Mahatma Gandhi University status 1997 itself envisages a Board of Adjudication of Students Grievances (BASG) which is empowered to entertain, adjudicate and redress any grievances of the students of colleges who may for any reason be aggrieved otherwise than by an act of the court. The Board shall consist of the Vice- Chancellor as Chairman, the Dean of Students, Two members of the Syndicate, Two Principals of Colleges, member of Academic Council, Chairman of the University Union, 3 Chairmen of the College Unions and the Registrar.

The Board considers complaints and hears, record the arguments of the parties concerned and findings in respect of the complaint refers to the Syndicate for final redressal. The above BASG was reconstituted in the University on 02-11-2016

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

VISION

Mahatma Gandhi University envisions excelling in the field of higher education and catering to the scholastic and developmental needs of the individual, through continuous creation of critical knowledge base for the society's sustained and inclusive growth

MISSION

- To create an environment that would foster higher education in its area of jurisdiction
- To create educated individuals qualified in specialized areas of knowledge
- To plan and implement academic programmes of the highest quality that would foster the holistic development of individuals who will be empowered to act as the conscience of society
- To conduct and cause to be conducted undergraduate, postgraduate and research-level programmes of quality in sciences, the humanities, social sciences, and the professional disciplines
- To foster research and extension activities directed at the reorganization of existing knowledge and the creation of new knowledge for the development of society
- To help in the creation and development of manpower that would provide intellectual leadership to the community
- To provide skilled manpower to the professional, industrial and service sectors in the country so as to meet global demands
- To help promote the cultural heritage of the nation and preserve the biodiversity of the region
- To promote national development by imparting education and culture to the people of the areas coming under the jurisdiction of the University
- To develop itself into an institution with the highest standards of excellence without losing sight of the importance of social equity

6.2 Does the Institution has a management Information System

Yes. Introduced student information database and semester progress card (SIC – Student Information Card)

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Our institution periodically updates the curriculum and syllabus in a systematic way. The curricula of all the courses were revised and updated. In the case of Schools, the faculty council revises curriculum and syllabus. The revision in the curriculum/syllabus is mainly based on the class room experience with course content and scientific advancements in the similar field. The module of electives and dissertation project are designed in such a way to address the current/future requirements. Most Schools used ICT in integrated teaching methods as well as new audio-visual methods for curricular transactions. Subsequent

syllabus revision and updating in order to meet the changing requirements of the industry is successfully done every year

6.3.2 Teaching and Learning

The University has developed a very effective, transparent and rigorous internal mechanism to assess the cognitive ability of students and research scholars as well as to ascertain the level of knowledge, intelligence and articulation they have acquired over time. Teaching and learning practices were done in a student centric manner. The faculties always incorporate updated research findings in the curriculum, to make the students enable to address research problems. The learning experience of the student is also enhanced by the aid of field works, interaction with eminent personalities in their field of knowledge, visiting other institutions of premier importance. 24X7 access to e-journals and digital resources is provided to students.

6.3.3 Examination and Evaluation

The academic programmes were reviewed and redesigned under the Credit and Semester System (CSS). University conducts all internal and external examinations as per the time table frame for each semester. The evaluation and publication of the result are also being done on a time bound manner without fail. The students are evaluated through their performance in internal and external examinations, assignments and seminars. The pattern of questions was modified in order to assess the different level of understanding of the subject matter by the students. Continuous internal assessment was made more effective in a time bound manner. Continuous evaluation in the mode of questions and answers, spot test at regular intervals, supported with model exams are done.

6.3.4 Research and Development

Research programs are going on in different areas in collaboration with leading research institutions within India and abroad. These collaborations have made possible for the University to send their research students to different research labs of international repute. Some of the schools are conducting research programs focusing on community development. The University insists on contribution of research papers by the faculty to various books and journals. University has collaborations with several leading research institutions which enable the sharing /exchange of research students and undertaking

exchange programmes. There are special lectures on research methodology and course work upgradation of infrastructure for research, research tools and methods of data analysis is also a continuing process in the University. ABILITY - a project of School of Social Science is being conceived to address the needs of physically challenged students and researchers and to conduct research in disability studies

6.3.5 Library, ICT and physical infrastructure / instrumentation

MGU Library and Information System consists of the University Central Library and more than 30 libraries of the departments, schools and study centers existing in different campuses. The most important achievement of the MG University Library is the endorsement related to the PhD Theses Archives developed by the University Library. The Mahatma Gandhi University is one of the first fifty Universities to come under the UGC-Infonet Programme. Through UGC-Infonet E-journals Consortium, the University Library provides access to more than 4000 journals and databases. The University Library is a fully automated system using the library software package SOUL developed by the INFLIBNET Centre. The Library is also a member of the DELNET (Developing Library Network). Being a member of these networks, the library is able to share the resources of a number of other libraries and has been able to make inter library loan of books. INTUTE Open Access Online Service provides access to the very best web resources for education and research. The software packages used and all content included are evaluated and selected by a network of experts to create the INTUTE System, with millions of resources available on the Internet, it is difficult for researchers to find relevant and appropriate material even with good search skills and use of advanced search engines. Issues of trust, quality, and search skills are very real and significant concerns - particularly in a research context. The INTUTE database makes it possible to discover the best and most relevant resources in one easily accessible place. Researchers can explore and discover trusted information, and be assured that it has been evaluated by specialists for its quality and relevance. MGU is the only university from India, which could host such an official digital archive of PhD theses in the web using multilingual software and search Mechanism (for Malayalam, Hindi and English).

6.3.6 Human Resource Management

University has adequate number of administrative staff and satisfactory number of academic staff including contract faculties. Faculty student ratio at Schools is 1:2. During the period the academic staff had undergone refresher programs, conferences, seminars and academic exchange to enrich their knowledge and teaching and research experience. Faculty members have opportunity for their carrier growth along with the institutional development. Newly appointed faculties were provided a preparatory amount to start their lab and research activities. Administrative staff was also exposed to internal and external training programs for quality improvement. The achievements of the staff and the students are recognized with appreciation and by honouring them. Various cultural and social clusters were formed by students and staffs, organizing recreational events, social mobility programs, environmental campaigns etc.

6.3.7 Faculty and Staff recruitment

The recruitment of the faculties was done according to the UGC Regulation. Notifications are published in detail in the leading newspapers and university website. External subject experts are included in the expert committee. The selection committee comprising the eminent scholars in each area evaluates the research and teaching talent of the candidate. The recruitment of non-teaching staff is done as per the State Government and University statutory procedures

6.3.8 Industry Interaction / Collaboration

- There are several collaborative endeavours between the Schools of the University and industry.
- Faculty members are involved in various projects with industrial collaboration.
- Field visits to industries; institutions like DIET, SERT etc are undertaken by teachers, students and research scholars.
- In the School of Environmental Science, School of Chemical Sciences, School of Bio Sciences etc. persons from industries such as Agilent, Shimadzu, Perkin Elmer, Thermo etc. engage classes and workshop on the advancement in their respective fields, new instrumental technologies etc.
- In the School of Tourism Studies, experts from hospitality industry take classes.

- School of Environmental Science, like other academic departments has collaboration with Department of Forests and Wildlife, Government of Kerala, Periyar Tiger Reserve Thekkady, etc.
- There is active industry involvement in the form of internship opportunities and placement to these departments

6.3.9 Admission of Students

Students are admitted to courses in the University Departments through an entrance test followed by a Centralized Allotment Process (CAP) by the University involving written test which analyses their compatibility and service attitude. Through CAP an applicant can access several colleges/Programmes by putting in a single application online. It saves time, money and effort of the candidates seeking admission to courses/Programmes in affiliated colleges of MG University. The placement of the candidates in various programmes and institutions will be according to their choice, merit and socially determined norms.

6.4. Welfare schemes for

Teaching	Health Card, PAI , Quarters, Creche, Med Reimbursement, Recreation Facility , Weightage to wards for admission to Professional colleges run by the University
Non teaching	Same as above.
Students	Hostel Facility, Insurance, Financial support through different scholarships, fee concessions, Alumni meet, grievance cell, guidance and counselling, CUTE – Cultural organization etc.

6.5 Total corpus fund generated: Rs.4,946,812

6.6 Whether annual financial audit has been done Yes No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External	Internal
------------	----------	----------

	Yes/No	Agency	Yes/No	Authority
Academic	yes		yes	
Administrative	yes		yes	

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

- Regular meetings of CSS are held to consider necessary examination reforms among other things.
- Credit Based Semester System has been implemented with elaborate systems for internal and external valuations.
- Examination activities are carried out with the help of ICT. A Data Centre for which Rs.2 cr has been sanctioned by the Government is coming up in the University.
- Online generation of hall tickets has been introduced for several examinations conducted by the University.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

The Government of Kerala has introduced necessary legislation for establishing autonomous colleges in the State. Necessary changes have been made in the University Act in this regard and autonomous colleges have come into being in the jurisdiction of the University.

6.11 Activities and support from the Alumni Association

Annual alumni meets are held in various departments. The alumni meets help the students to secure placements in various organisations. The alumni participate in seminars and workshops as resource persons and delegates. The alumni have instituted various Scholarships and

Awards for the students. The alumni also help in guiding the students in academic activities, giving suggestions, technical and financial assistance, projects and job placements. Many of the alumni who have passed out from various departments are working in places all over the world in various positions, or as researchers etc. The alumni meet also felicitates outstanding students of the School. Interaction with present students, sharing of knowledge, experience, suggestions, and placement initiatives are materialized. Activities with social commitment, charitable activities, loyalty to the institution for the development are being done. Felize - An Annual meet of Alumni was held July June 2016. The alumni support the department for adequate placement of the outgoing batches.

The Alumni Associations of the Schools have been functioning at different levels. The students of the Schools are found in several walks of life, engaged in a variety of professions. Apart from India, they are working/studying in countries such as France, China, Japan, Kirgizstan, Ghana, Chad, Nepal, Kenya, Sudan, Ethiopia and Vietnam, Namibia etc. Similarly, many live and work in the United States, United Kingdom, Canada, Austria, Poland, Kenya, Saudi Arabia, China, Oman, and Switzerland. They include teachers in universities, colleges and other educational institutions, and research positions in embassies of various countries. Several of the students are pursuing research in well-known institutions. Most of the important newspapers in India and abroad have the former students of the School on their staff. A major Alumni Meet was organised on 30 December 2015 and was attended by several former students from the first batch (1983-1985) onwards

6.12 Activities and support from the Parent – Teacher Association

PTA meetings are organised by the departments.

The PTA also ensures that a cordial relationship exists among the department, students, parents and teachers.

Parents and teachers meet during admission process in an open forum meeting. Parents who are from all over Kerala, share their views and initial concerns during such meetings and are given the contact details of the School for raising any concerns they may feel during the tenure of their wards here. We are happy to say that we have been able to alleviate concerns by our mode of operation

6.13 Development programmes for support staff

i) A Computer training Programme is in place for University staff.

- ii) The University campus has a Health Centre, Fitness Centre in the University Campus. Yoga Classes are arranged by the University Women's Forum for Women employees
- iii) A Cancer awareness class was held by Dr V P Gangadharan, Oncologist, and Regional Cancer Centre Thiruvananthapuram.
- iv) An awareness class on Heart Diseases by Dr. T K Jayakumar, Superintendent Medical College, Kottayam.
- v) On the job training programme for Section Officers and Assistant Section Officers.

6.14 Initiatives taken by the institution to make the campus eco-friendly

- The University Campus is plastic free.
- Students lead a campaign 'no flex and no plastics' campus and took initiative to plant trees and make the campus green.
- Planted medical plants, ornamental plants fruit trees and perennial plants as a part of green campus programme.
- The University insists on performing research activities in a green manner avoiding toxic synthesis routes and chemicals.
- An efficient rain water harvesting system exists in the campus.
- Celebrated World Wet Lands Day 2016 through conducting awareness class on wetlands.
- Celebrated Environment Day to create an awareness highlighting environmental issues and planted saplings in the premises to enhance the greenery.
- Celebrated Earth Day 2017.
- The School of Environment Sciences maintains the Jeevaka Live Laboratory named after the disciple of Sree Budha, where there is a rich diversity of flora and fauna, including 12 varieties of migratory birds from the Himalayas.
- Auditing the status of solid waste generation and management in the campus
- Conducting regularly, environmental awareness programmes among public and school children

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

- A Department blog has been started by the School of Gandhian Thought and Developmental Studies. Some of the important innovations during the academic year are:
- CLENS (Club of Environmental Students) conducted programmes on environmental awareness in the campus as well as outside. The Thursday Club of this forum conducts weekly activities for its student members aiming to improve their communicative skills.
- A School level digital repository of workshops, seminars, PhD open defences and other e-learning contents was generated for future use as a research resource in the School of Computer Sciences. The PG Students were insisted to take up research papers for presentation in seminars for exposure to various research resources, facilities and tools of intensive research at the PG stage itself.
- With a view to train the students and improve their professional qualities and to ensure maximum intake of students to Bench, special training was organized in the School of Indian Legal Thought with the assistance of alumni and PTA. Former students of the School who are now serving in judicial service and in other respectable legal fields were roped in for the purpose.
- In the School of International Relations & Politics the faculty and research scholars collaborated in various impact assessment studies having a direct bearing on social policies and programmes. The three districts level outreach studies on the MGNREGS undertaken in collaboration with the State Institute of Rural Development (SIRD) provided opportunities to have first hand experience at the micro level. A team of students and teachers also visited Attappady region during the year, in the background of the increasing incidents of child mortality and women abuses, to study the transformation which has occurred in the region over the years. Thus, the researchers and faculties involved in these studies have benefitted from their field experience.
- The Inter University Centre for Disability Studies initiated the setting up of a unit to provide legal support service to the persons with disabilities.
- The BEd trainees were given maximum opportunities to develop their potentials through life skill training, to be technologically competent, and to know the 'nature' and measures for environmental sustainability.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

- The University has been successful in introducing Massive Online Open Course (MOOC). Several of its schools have taken an initiative in this regard.
- Add on courses under ASAP has been started in several Schools of the University.
- Linkages and Collaborations have been established with several national and international agencies and these have bolstered the University's research profile.
- The University has executed MoUs with research institutions of national and international repute like FIST, DST, ISRO, BARC, UGC etc. during the period.
- The Syllabi of various programmes have been updated and revisions have been made.
- Student interaction with eminent scientists and Nobel Laureats was facilitated by the erudite programme.
- Student centric teaching learning process has been strengthened.
- The infrastructure especially on the IT front has been toned up during the period.
- PhD holders were honoured in the month of August 2017
- Edmodo, a digital online teaching learning interactive platform to enrich the teaching learning quality, crossing the barriers of time and place through its superior features like online discussions, online tests, pooling resources, online submission of assignments etc.
- Able to invite Professors from international Universities as planned to familiarize global educational practices.
- Biannual alumni meets were conducted for effective interaction with the alumni

7.3 Give two Best Practices of the institution

Converting abandoned wetland as productive land: a “live laboratory” model for sustainable agriculture

1. **JAIVAM-** The University has implemented *JAIVAM 2017*-,a public education programme to spread organic farming in Kottayam District. It is commendable that the University has published a Handbook on organic farming and has distributed it among five lakh households. Around ten thousand National Service Scheme volunteers were selected to propagate the boons of organic farming among the public.

Project of Inter University Centre for Organic Farming and Sustainable Agriculture (IUCOFSA).

Abstract

The project aims at the conversion of abandoned paddy field to cultivable productive wetland and to sustain it as a “live laboratory” model. The neglected wetland that stretches out an area of about 6 acres in Vallakom panchayat is acquired on lease for the project. IUCOFSA plans to accomplish organic farming out there giving due importance to sustainability and innovative wisdom in agriculture. Indigenous varieties of rice will be selected for farming. It is planned to follow the paddy-fish model as well as other methods to make agriculture ecofriendly as well as profitable. The University will provide needed scientific inputs and support. Nature friendly farming for 3 years is presumed to rejuvenate the neglected wetland that in turn shall be returned to the farmers. IUCOFSA plans to make the program participatory involving the students, researchers and the natives. The knowledge generated would help to extend the possibilities of organic farming in the fruitful conversion of neglected wetlands spread over across other areas of the state. Additional skill acquisition program (ASAP) (both online and offline) also forms an integral part of the project.

Objective

The proposed project aims to mature the deserted wet land to a fruitful farm, to design a prototype, thereby motivating the people across the state/country.

Important objectives of the proposed project include:

To convert abandoned wetland to cultivable and productive land, to implement organic farming with the techniques like crop rotation, application of green manure, compost and the use of organic pest control etc., to promote and advocate the use of indigenous varieties of seeds, fishes and animals, and to create a paradigm shift in the concept of conversion of abandoned wetland to beneficial and good earth, to effect the use of bio-pesticides and bio-fertilizers in farming, to generate a data system of the whole process of farming and to make it available to people across the country, to use this project as a study material for the students and researchers through Additional Skill Acquisition Program (ASAP). The whole project will be available both online and offline across the globe for interested students, to implement the project as a

joint venture of the University, scientific community, and the native people, to evolve the project as a model programme attracting the farmers towards organic farming.

Output

IUCOFSA is very proud that the Centre has produced *Njavara* paady worth Rs .50,000/- by implementing the principles of organic farming in the abandoned paddy field by converting it into a productive wetland .

2.MOOC

- The International Inter University Centre for Nanoscience and Nanotechnologys has introduced a MOOC on ‘Global Understanding’ as a credit open course in collaboration with North Carolina State A & T University. The Centre is also developing MOOC on Introduction to Nanoscience and Nanotechnology and on Analytical Instrumentation Technique.
- The School of Pure and Applied Physics has developed the conceptual outline of a MOOC based on Astronomy.
- The School of Gandhian Thought & Development Studies has developed an online certificate programme in ‘Gandhian & Peace Studies’.
- The School of Tourism Studies has started a Diploma Course of 6 months duration on ‘Tourism Destination Services Management.
- The School of Management & Business Studies has initiated action for starting MOOC course on General Management & Functional areas.

7.4 Contribution to environmental awareness / protection

- Celebrating environment day to create an awareness highlighting environmental issues and needs of protection.
- Students are practising a campaign ‘no flex and no plastics’ and planted trees.
- To protect and safeguard the destination we kept aloof from the usage of plastics and throwaway plastic bottles and other materials.
- Efforts were made to protect the virginity and the pristine nature of the terrain.

7.5 Whether environmental audit was conducted? Yes yes No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

- All Under Graduate and Post Graduate Programmes offered by the University have been brought under the purview of the Centralised Admission Process.
- Construction of two additional storeys to the Pareeksha Bhavan so as to augment the infrastructural facilities available to conduct examinations efficiently.
- Tapping of RUSA funds and steps and utilisation of the same efficiently.
- Steps have been taken through the IUCOFSA to spread awareness about various aspects regarding organic farming among students and the general public.
- The University has started a mission to propagate the principles of organic farming to turn out Kottayam as a hundred percent organic literate district-*Jaiva Saksharatha Yagnam 2017* powered by the state government

Criterion 8. Plans of institution for next year

School of Tourism studies

- The Syndicate of the University has issued orders to commence construction of a customized building for the School at a cost of Rs. 10 crores. The Government of Kerala has earmarked funds for the project. The construction activities are expected to commence soon as all other formalities are over. The amenities, labs etc planned according to the specifications of the national bodies like NCHMCT will cater to the requirements of all tourism management, hospitality management and doctoral students and will help the institution to develop and enhance academic collaboration and exchange programmes with the leading institutions in the world.

School of Pure and Applied Physics

- To Perceive a need for creatively strengthening the knowledge absorption process via ICT aided means since the students in their feedback while simultaneously expressing satisfaction about their teachers and the syllabus express some reservations about the teaching method and hence plan to address the same. The School has already instituted plans, for the coming years, for strengthening and expanding the research scene in the department through funding from various governmental programs under UGS, DST, DAE, GoK and the same are being carried forward. Talks and workshops with our own alumni as resource persons and also outstanding academics from other institutions and

abroad will be conducted. The School will be adhering to awareness of social responsibilities and imbue the spirit of the same in the specific as well as general activities.

School of International Relations and Politics

To

- Strengthen infrastructure facilities in the School/ annex.
- Strengthen Centres of Area Studies.
- Submit proposals for Major Research Projects to the ICSSR, UNDP, UGC, Government of Kerala, and Kerala State Higher Education Council.
- Organise a major international conference under the auspices of KPS Menon Chair and Nelson Mandela Chair
- Invite Professors and eminent personalities under 'Erudite' Scheme and scholar-in-residence programme.

School of Environmental Studies

To

- Conduct a InterNational Workshop on water purification technologies.
- Strengthen the research by procuring of analytical instruments like continuous ambient air quality analysers.
- Implement the collaborative research work with international agencies.
- give hands on training for MSc students
- focus advanced research on the following thrust areas ;Air pollution studies, Polar environment research, Microbial fuel cells Advanced oxidation process ; Phycoremediation; Natural fibres studies, Biofuel; Mercury geochemistry, Drinking water pollution

School of Gandhian Thought and Developmental Studies

To

- fill the vacant post and to start a programme in peace and conflict resolution studies

School of Behavioural Sciences

To

- Conduct of 4 National and one international seminar on topics related to psychology, rehabilitation ,special education and research

- Conduct of poster exhibition and awareness classes on disability prevention and rehabilitation in the community
- Establish academic and research collaboration with palliative care centres and institutions working in the area of disability prevention and rehabilitation
- Establish more academic and Research collaborations with National and International agencies
- Submit research project proposals and obtain sanction for the same
- Expand the activities of the Vocational Rehabilitation Centre and Counselling Centre of the School.
- Utilize the facilities available in Inter University Centre for Disability Studies (which is a part of the School) to strengthen the academic, Research and extension activities of the

Department of Life long Learning

To

- start various certificate and Diploma Courses,
- Proposals already submitted,
- Waiting for administrative sanction

School of Computer Sciences

To

- Start a new Postgraduate Diploma programme on “Internet of Things”
- Set up an E-content development Centre.
- Conduct National/International conferences and workshops.
- Enhance the overall research output.
- Initiatives were taken to set up a High Performance Computing facility in the School utilizing the funding of DST-PURSE scheme.
- The School has plans to strengthen research in big data analytics contributing to various data intensive scientific computational requirements using high performance computing.
- Provide software development solutions and consultancy services to the society. The School has submitted a proposal for setting up Digital Solutions and Consultancy Services (DSACS). This initiative also aims at providing industry level working experience and exposure to students who pass out from the School.
- Enhance the overall research output.

School of Pedagogical Sciences

To

- Buy new books to the library
- Conduct guest talks on research methodology

Advanced Molecular Materials Research Centre

To

- Establish a well equipped materials research lab at CAC
- Diversification of research activities (Research networking)
- Offer research fellowships
- Procuring more equipments which can be shared for other depts:
- Induction of new research personnels
- International conference in every year
- Bringing out more research publications in high impact journals
- Publishing books and Reviews
- Submission of more research proposals useful for industries
- Indo-Australian: AMMRC is planning MoU with Australian Institute of High Energetic Materials for active collaborations on high energy materials research. (With Prof. Alexander Lukin).
- Proposal on *Flame retardant Polyurethane-POSS composites* is ready for submission to DST P.I. Dr. S.Anas and Dr. P.Radhakrishnan Nair)

Centre for English Language and Communication Skills

To

- revive the activities of the centre by offering the existing programmes and innovative programmes

Inter University Centre for Disability Studies

- M.Phil Disability studies, 2017-'18 batch.
- Extension and expansion of DREAMS
IUCDS envisages to start extension centre at various locations of the state. The centre has submitted project proposals to the Government for the same.

Sl. No	Seminars ,workshops and short term programmes - Major events 2017-‘18	Month
1	State level seminars on the issues and challenges of transgender.	July 2017
2	Awareness classes in the community for students, teachers, anganawadi workers.	July-September 2017
3	A Tech fest to showcase the projects in the field of disability for students from the Engineering Colleges	October 2017
4.	<p><u>Short term training programme on:</u></p> <ul style="list-style-type: none"> -Disability inclusive disaster risk management - Vocational rehabilitation of persons with disabilities - Aged care : Alzheimer’s & dementia care <p>-International film festival on disabilities in association with We care International film festival ,a partner organisation of UNESCO</p> <p>-National seminar on Paradigm Shifting inclusive education in association with Brotherhood ,New Delhi</p> <ul style="list-style-type: none"> -Workshop on Research Methodology. Autism spectrum disorders 	<p>August 2017</p> <p>September 2017</p> <p>September 2017</p> <p>November 2017</p> <p>December 2017</p> <p>February 2018</p> <p>March 2018</p>

University Centre for International Co Operation

- International seminar on “e-learning opportunities in global Education” during October under Seminar/Syposium/Conferences
- International Students Meet during September under Extension Programme
- Initiation of India Study Programme
- Conduct of International Faculty Development Programme during December 2017
- MOOC course on “Understanding India” under India Study Programme
- Preparation of Guidelines for Semester Abroad Programme
- Initiating steps for the Construction of International Hostel
- Possibility of a new Office space with a modern front office

Institute for Contemporary Chinese Studies

- **Semester Abroad Study Programme:** Semester Abroad Study Programme whereby students from Mahatma Gandhi University will spend one semester in China and

specialize in course modules related to China. On the other hand, Chinese students shall spend one semester in Mahatma Gandhi University, focusing on India studies;.

- Initiate MPhil/PhD programmes on Chinese studies in association with SIRP during the academic year 2018-19
- Visiting Faculty and Lecture series
- Chair on Chinese Studies
- To initiate collaborative research programmes in the areas of higher education reforms, development models, local governance, urbanization, Chinas global engagements etc. with Chinese and other foreign universities;
- Organize an international conference on China during Jauary 2018 in association with National and International Partners;
- Initiate certificate and language courses in Chinese language for the Students, Faculty, Researchers and the Public;
- Initiate various programmes for creating awareness on China and Chinese Studies;
- Organize seminars/workshops during 2017-18 in association with national agencies and various centers of Mahatma Gandhi University; 10
- Institute Post-Doctoral/Research fellowships on China/China-India Studies to the students and scholars from India and abroad.

Databank on China

The ICCS shall set up an authentic and reliable database on China. The Database shall provide knowledge and information on all aspects of Chinese Society, Polity, Economy, Environment, International Relations etc, that will be useful to students, research scholars, academics and policy makers. Besides, the Database will be beneficial to all stakeholders such as industries, researchers, NGO's and media.

Awareness campaign on China

The ICCS shall initiate a variety of programmes that shall generate academic, intellectual and practical knowledge on the Chinese Studies. It shall be done through publication of books, monographs, essay competition, quiz competition, collaborative seminars among others.

Inter University Centre for Social Science Research and Extension

Looking forward to starting research projects once the centre get information from research funding institutions.

International and inter University Centre for Nano Science and Nanotechnology

- Effective and efficient transaction of Patent in to product.
- Will collaborate with large Number of Industries for scaling up the products

Inter University Instrumentation Centre

- Resetting the centre in the new “Convergence Academy Complex”.
- Procurement of more sophisticated analytical instruments.
- Initiating new emerging research areas.
- Giving more thrust in developing sustainable technologies (eg., water purification technology, developing chemical sensors)
- Certificate/diploma courses in analytical instrumentation

Advanced Centre of Environment studies and Sustainable Development

- Strengthening of research and development activities of the Centre
- Preparation of a revised detailed report of the Centre from 2010 to 2017
- To conduct one international conference and one national conference
- To strengthen the linkages already established
- To start an earthworm taxonomic centre
- To enhance the extension activities

Inter University Centre for Studies in Science of Music

- IUCSSM is conceived to provide the much needed interface between the music and science. The centre serves as a platform for the convergence of experts from across the Universities in Kerala and also from outside Kerala and India
- To promote contacts, exchanges, collaborations and sharing of resources in science of music through research and study programmes, courses, projects and conferences across a wide range of scientific themes of intellectual concerns.
- Experts from various Universities within the state, outside and worldwide can cooperate in organizing teaching, research and other activities of the IUCSSM stimulating interdisciplinary research in Science of Music.

- To establish a research studio that can facilitate various research activities and recordings of international standards
- To collaborate with international organizations in the field of 'Science of Music'
- To promote innovative ideas (Scientific, technological and aesthetic aspects) in science of Music
- To conduct and support research in all possible areas in 'Science of Music'
- To conduct short term courses in Indian music, western music and also in various scientific aspects of the same.
- Research proposals are to be invited from interested groups and institutes and the Centre shall provide financial assistance to them, if found eligible

Center for Yoga and Naturopathy

To

- Develop this new institute as a centre of convergence for alternative healthcare systems.
- Organize international / national conferences involving alternative healthcare practitioners and researchers from various parts of the world.
- Establish short term programmes in Yoga and Naturopathy.
- offer short term 'Semester in India' programmes for aspiring international students

Name: Prof (Dr) A.M.Thomas

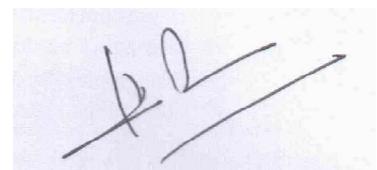


Signature of the Director, IQAC

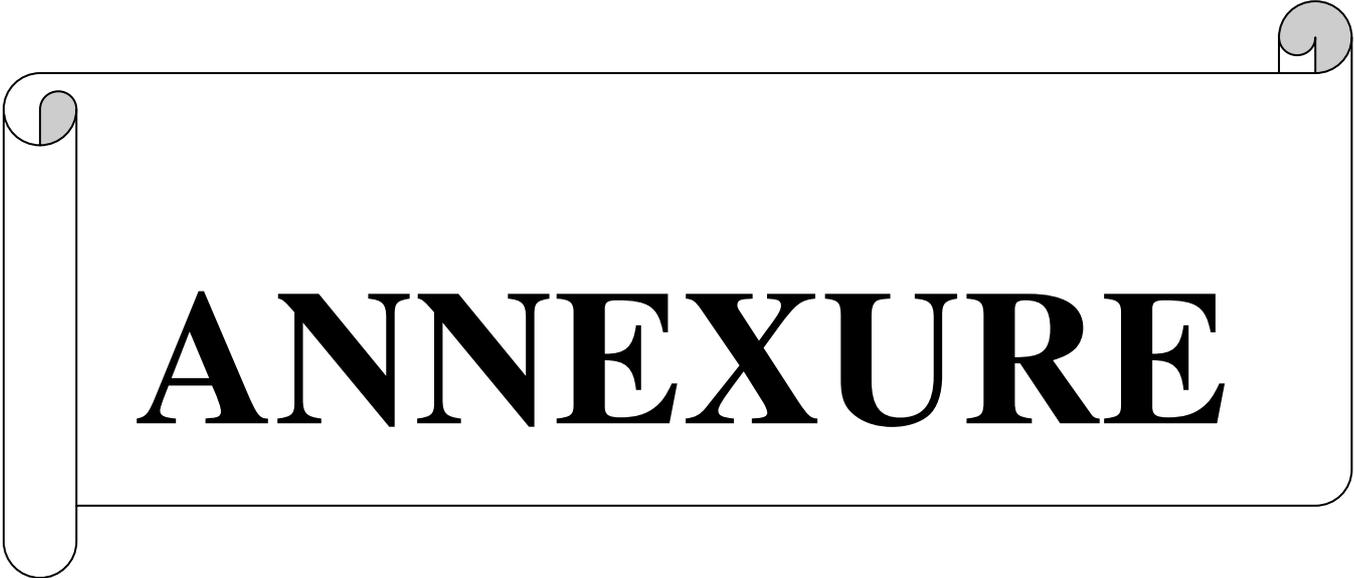
PD Hills

10/10/2017

Name: Dr. Babu Sebastian, Vice Chancellor



Signature of the Chairperson, IQAC



ANNEXURE

SCHOOL OF BEHAVIOURAL SCIENCES

A. GENERAL ACADEMIC/ EXTENSION ACTIVITIES.

- The School has launched four unique **Extension activities**:

1. **Jyothirgamaya** – It is meant for development of awareness among the public, students, teachers, teacher trainees, health professionals and the like, on concepts, causes, characteristics, and management of various disabilities.
2. **Insight** – This programme specifically targets the formulation as well as modification of attitude among the public, students, teachers, teacher trainees, health professionals and the like, on concepts, causes, characteristics, and management of various disabilities and mental health related issues.
3. **Nyponia**: Development of Specific Skills for the effective management of disabilities, health as well as mental health issues.
4. **Pratheeksha**: This programme is related to screening, early identification and early intervention of disabilities.

The School utilizes its student resources from M Sc, MPhil and Ph D programmes to run these programmes effectively. Faculty members supervised all these activities.

5. Organized in collaboration with Centre for Yoga and Naturopathy, Mahatma Gandhi University, an Invited Lecture of Sr. Lucy Kurien, Founder Director, 'Maher' on the topic 'Rehabilitation of the Destitute: Trends and Issues', at the School of Behavioural Sciences, on 01.09.2016.
6. Organized Onam Celebration and Cultural Fest in the School on 08.09.2016.
7. Instituted the 'Institutional Ethics Committee' of the School of Behavioural Sciences, and the University issued the relevant order on 25.05.2017.
8. The School Organized an Orientation programme for the Students of National Institute for the Empowerment of Persons with Multiple Disabilities, Chennai, on 09.06.2017.

B. PARTICIPATION IN SEMINAR/CONFERENCES/COMMITTEES OF FACULTY MEMBERS

Dr. P. S. Sukumaran, Professor and Director

1. Attended 'ASAP Conference on Skilling the Differently Abled', organized by Department of Education, Government of Kerala, Thiruvananthapuram on 08.07.2016.
2. Attended Academic Council Meeting of Mahatma Gandhi University on 18.07.2016.
3. Functioned as Chancellor's nominee in the Selection Committee Meeting for the promotion of teachers to the post of Professor, University of Calicut, on 19.07.2016.
4. Functioned as External Subject Expert in the Pre Ph. D. Presentation of Department of Education, University of Kerala, Thiruvananthapuram on 30. 07.2016.
5. Functioned as Resource Person to the Three Day National Conference on Autism and presented paper on 'Social and Public Perspectives on Rehabilitation of Children with Autism', organized by Saigram, Attingal, Thiruvananthapuram on 30.07.2016.
6. Delivered lecture on 'Untouched Human Potentials: Psycho educational Possibilities' in the IAS Foundation programme for school students. Organized by NSS Union, Kottayam on 31.07.2016.
7. Has been nominated as 'Dean', Faculty of Behavioural Sciences with effect from 04.08.2016.
8. In the capacity of Director of Research, Mahatma Gandhi University convened University Research Committee Meeting on 16.08.2016.
9. Has been nominated in to the 'Standing Committee of Academic Council' of Mahatma Gandhi University with effect from 16.08.2016.
10. Functioned as External Subject Expert in the Selection Committee for the promotion of teachers, University of Calicut, on 17.08.2016.
11. Functioned as Resource Person in the SCERT Workshop on 'Development of Text Book for Students with Intellectual Disability' at Thiruvananthapuram on 18.08.2016.
12. Chairman, Open Defence and Public Viva voce of Ph D Thesis. Avinashilingam University, Coimbatore, Tamil Nadu. 14.10.2016.
13. Convened University Research Committee Meeting, Mahatma Gandhi University. 18.10.2016, as Director of Research, M.G. University.
14. Chairman, Open Defence and Public Viva voce of M Phil Thesis. Sree Ramakrishna Mission Vivekananda University, Coimbatore, Tamil Nadu, 22.10.2016.
15. Resource Person, Conference on Convergence of Agencies/Services Working for the Differently Abled. SCERT, Thiruvananthapuram. 24.10.2016.

16. Convened a Conference of Special Teacher Educators. Mahatma Gandhi University. School of Behavioural Sciences. 02.11.2016.
17. Organized National Seminar on 'Developmental Disabilities – Inclusion from the Early Years', in connection with the Observance of International Day of Persons with Disabilities. School of Behavioural Sciences, Mahatma Gandhi University. 02.12.2016.
18. Convened University Research Committee Meeting, Mahatma Gandhi University. 07.12.2016, as Director of Research, M.G. University.
19. Convened a Panel Discussion on 'Trends and Issues in the Education and Training of Persons with Intellectual Disability', in connection with the Observance of National Day of Persons with Intellectual Disability. School of Behavioural Sciences. 08.12.2016.
20. Chaired a Session in the 'Interface of Exhibition' of Business Innovation and Incubation Centre. Mahatma Gandhi University. 15.12.2016.
21. Organized two day's workshop on Research Methodology and Statistics on 16-17, January 2017.
22. Resource Person for the workshop on Research Methodology and Statistics and handled one session on Construction and Validation of Attitude Scales, 17.01.2017. School of Behavioural Sciences.
23. Attended Academic Council meeting of Mahatma Gandhi University on 22.03.2017.
24. Convened a meeting of faculty members of all the five affiliated colleges of Special Education to discuss the problems and issues related to the implementation of the revised curriculum of B Ed Special Education (Intellectual disability), on 24.01.2017 in the School of Behavioural Sciences.
25. Conducted the Pass Board meeting of the second semester B Ed Special Education (Intellectual Disability) degree examination, Mahatma Gandhi University, on 30.01.2017.
26. Delivered an Invited Talk on Special Education as a part of the Community Living Camp, organized by the Mahatma Gandhi University College of Teacher Education, Kudamaloor, on 08.02.2017.
27. Attended Mahatma Gandhi University Research Committee meeting held on 09.02.2017.
28. School of Behavioural Sciences organized three day's Indian Sign Language Foundation Course in collaboration with Association for the Welfare of the Handicapped, from 16-18, February 2017 at Kozhikode.

29. Organized three day's International Conference on Inclusion- Beyond Borders, ICI 2017 in the School of Behavioural Sciences from 23rd to 25th February 2017.
30. Resource Person for the International Conference on Inclusion-Beyond Borders, ICI 2017 and handled one session on Challenges of Inclusion. 23rd to 25th February 2017. School of Behavioural Sciences.
31. External Subject Expert for the Doctoral Committee Meeting of Department of Applied Research, The Gandhigram Rural Institute – Deemed University, Gandhigram, on 27.02.2017.
32. Organized One day Inter collegiate Seminar on Rights of Women in association with NSS Campus unit, to observe the International Women's Day, on 07.03.2017 in the School of Behavioural Sciences.
33. Delivered the Valedictory Message in the Three Day's International Residential Seminar on Yoga for All for Health for All, organized by the Centre for Yoga & Naturopathy, School of Gandhian Thought and Development Studies, Mahatma Gandhi University, on 10, 11 & 12 March 2017.
34. Convened a General Body Meeting of the Research Scholars of the School of Behavioural Sciences and discussed the issues related to the period of registration and duration for submission of Ph D Thesis, in the context of the new UGC Regulation, on 17.03.2017.
35. Delivered Valedictory address in the Valedictory Meeting of the TMA Institute of Counselling, Amalagiri, Kottayam, on 21.03.2017.
36. One day Seminar was organized in connection with the Observation of World Down Syndrome Day, on 21.03.2017, in the School of Behavioural Sciences.
37. Organized Two day's National Seminar on Loco-motor Disabilities, on 28-29 March 2017 in the School of Behavioural Sciences.
38. Resource Person to the Rehabilitation Council of India sponsored National Workshop on "Pre-Vocational Skills" organized by St. John the Baptist's College of Special Education, Nedumkunnam on 01.04.2017 and Presented a Paper on "Concept, Areas, Skills, and Teaching Strategies of Pre-Vocational Skills".
39. Resource Person to the National Conference on Inclusive Education-2017 organized by Janey College of Allied Health, Eroor in Collaboration with Rehabilitation Council of India from 10th to 12th April 2017 and Presented a Paper on "Inclusive Education for Students with Intellectual Disability: Thought and Practice".

40. Resource Person to the “Planning Workshop for Teachers Training - Intellectually Challenged” organized by SCERT Thiruvananthapuram on 25.04.2017.
41. Resource Person to the “Nursery Teacher Training Camp” organized by Aravinda Vidya Mandir, Pallikkathode and handled a session on “Childhood Disabilities: Early Identification and Intervention” on 27.04.2017.
42. External Expert for the Doctoral Committee of School of Gandhian Thought and Developmental Studies, Mahatma Gandhi University, on 05.05.2017.
43. Attended the Academic Council of Meeting of Mahatma Gandhi University on 06.05.2017.
44. Resource Person to the ‘Training of Trainers programme on Management of Learning Disabilities’ and handled a session on the “Management of Learning Disabilities”, organized by the Indian Academy of Pediatrics, Kerala Chapter at Kottayam on 28.05.2017.

Dr. Rajeevkumar N., Associate Professor

1. Conducted Forth Semester MSc Clinical & Counseling Psychology Dissertation evaluation and Viva Voce at School of Behavioural Sciences, Kannur University on 13th & 14th July 2016.
2. Conducted Forth Semester MSc Psychology Dissertation evaluation and Viva Voce at Department of Psychology, UC College, Alway on 29th & 30th August 2016.
3. Conducted Forth Semester MSc Clinical & Psychology Dissertation evaluation and Viva Voce at S.N. College, Vadakara on 5th September 2016.
4. Chaired scientific session at International Seminar on Best Practices in the Management of Learning Disabilities conducted by Department of Life Long Learning, University Of Calicut at University of Calicut on 23rd & 24th September 2016.
5. Attended National Workshop on Advanced Statistical Tools and Software for Biological Researches Organized by School of Bio Sciences, Mahatma Gandhi University, Kottayam on 27th Sept. to 1st October 2016.
6. Seminar Organized in connection with World Mental Health Day 2016 on Psychological First aid on 18/10/2016. School of Behavioural Sciences, Mahatma Gandhi University.

7. Participated in the National Workshop on Advanced Statistical Tools and Software for Biological Research on 27th -1 Oct 2016 organized by School of Bioscience ,MGU
8. Chaired a session in the National Seminar on current Trends in Dementia care organized by School of Gandhian Thought and Developmental Studies, MGU on 14th & 15th Nove.2016 at SGTDS auditorium.
9. Attended the International conference on Solution focused therapy held on 21st -23rd Dec. 2016 at University of Calicut.
10. Seminar Organized in connection with World Mental Health Day 2016 on Psychological First aid on 18/10/2016. School of Behavioural Sciences, Mahatma Gandhi University.
11. Participated in the National Workshop on Advanced Statistical Tools and Software for Biological Research on 27th -1 Oct 2016 organized by School of Bioscience ,MGU
12. Chaired a session in the National Seminar on current Trends in Dementia care organized by School of Gandhian Thought and Developmental Studies, MGU on 14th & 15th Nove.2016 at SGTDS auditorium.
13. Attended the International conference on Solution focused therapy held on 21st -23rd Dec. 2016 at University of Calicut.
14. Organized one day annual meet of Alumni of School of Behavioural Sciences on 18th February 2017.
15. One day Seminar on Addiction Behaviour was organized in connection with the Alumni meeting on 19.02.2017.
16. Delivered a talk on Psychological aspects of Inclusion at the International Conference on Inclusion 2017 organized by School of Behavioural Sciences, Mahatma Gandhi University, Kottayam on 23-25 February 2017.
17. Organized a Psycho Film Fest, 2017 with the objective of creating greater awareness regarding schizophrenia, depression, addiction, and stress and coping strategies, and learning disorders, in the School of Behavioural Sciences on 30.03.2017.
18. Dr. Rajeevkumar N., Associate Professor, School of Behavioural Sciences was nominated to the Academic Council of Mahatma Gandhi University.

Dr. Baburaj P.T, Senior Lecturer

1. Organized one day work shop on Research Methodology : Tool construction and Test Standardization as Director, IUCDS on 08.07.2016 at School of Behavioural Sciences.
2. Conducted a session on Special Education in the CRE Programme organized at Nirmala Sadan Training College, Muvattupuzha on 29.07.2016.
3. Conducted One day seminar on Law and Empowerment of differently abled women at Erattupetta on 19.08.2016 in collaboration with Mother Charitable Trust, Kottayam.
4. Presented a paper on Need for Advocacy initiating in Kerala State in the One Day State Advocacy meeting on awareness about Deaf Blindness Organized by State Learning Centre on Deaf Blindness supported by SENSE International India.
5. Attended Three Day Workshop/Training for TOT on Disaster Management and Disability organized by Kerala State Disaster Management Authority, Thiruvananthapuram on December 7 - 9 , 2016.
6. Organized one day National Conference on 'Inclusion: 'Leave no one behind' on 17th December 2016 at Assembly Hall, M.G.University.
7. Organized 3 days National workshop on "Research Methodology" in IUCDS, School of Behavioural Sciences, M.G University on 26 -28 April, 2017
8. Organized 2 days workshop on "Disaster Risk Management and Disability" in collaboration with Kerala State Disaster Management Authority, Govt. of Kerala Thiruvananthapuram on 17th and 18th May 2017.
9. Resource Person,C NET Coaching at CUSAT, April 2017.
10. Resource Person- UGC NET Coaching at Sree Sankaracharya University, Kalady, May 2017

Dr. K. Muhamad Mustaffa, Assistant Professor

1. Participated and co-ordinated of International conference on 'Inclusion beyond borders (ICI-2017) held on 23-25 February 2017 organized by School of Behavioural Sciences.
2. Organized three day's Indian Sign Language Foundation Course in collaboration with Association for the Welfare of the Handicapped, from 16-18, February 2017 at Kozhikode

3. Dr. K. M. Mustaffa, Asst. Professor & Hon. Director, Institute of Research in Learning Disability of School of Behavioural Sciences Organized One Day National Seminar on “Management of Learning Disabilities” in collaboration with the Department of Life Long Learning and Extension, Mahatma Gandhi University, on 29.04.2017.

Mr. Rajesh E., Assistant Professor

1. One day workshop on “Research Methodology: Tool construction and test standardization” on 8 th July 2016, held at School of Behavioural Sciences, Mahatma Gandhi University, organized by Inter University Centre for Disability Studies, M.G University, Kottayam.
2. National level hands-on training workshop on “Structural Equation Modeling(SEM) using IBM SPSS AMOS” conducted by the Christ University, Bangalore on September 28-30 at Christ University Nodal Office, Vazhuthakkad, Trivandrum.
3. Participated and co-ordinated of International conference on ‘Inclusion beyondborders (ICI-2017) held on 23-25 February 2017 organized by School of Behavioural Sciences.
4. Undertaken the second valuation of Two course in the M.Ed Special Education (MR/LD) Degree Examination, University of Kerala.
5. Participated as organizer the National Seminar on ‘Locomotor Disabilities’ organized by School of Behavioural Sciences on 28-29 March 2017.
6. Undertaken the second valuation of 5 course Second Semester B. Ed Special Education (MR/LD) Degree Examination, University of Kerala.

Ms. Rincymol Mathew, Assistant Professor

1. Organized National Seminar on Developmental disabilities as convenor on 02.12.2016.
2. Organised plastic free campus campaign and planted tree saplings in the campus mobilising the NSS volunteers of the campus unit on 02/07/2016.
3. Being the Coordinator, NSS Unit, M. G. University Campus, has Organized and Distributed ‘Onam Kits’ to 15 Identified BPL Families residing in

Athirampuzha Panchayath in collaboration with NSS Unit, Mahatma Gandhi University on 12.08.2016.

4. Co ordinated the observance of SADBHAVANA DAY in the campus as programme officer, NSS Campus Unit on 20/08/2016
5. Organised and participated in the three day nature camp for NSS volunteers at CHINNAR collaborating with Department of lifelong learning and Extension ,M.G University from 13/08/2016 to 15/08/2016.
6. Organized a one day plastic cleaning campaign in the campus on 02.10.2016 as programme officer, N.S.S Campus unit.
7. Organized intercollegiate collage competition on communal harmony as programme officer, NSS, MG University campus, on 31.10.2016.
8. Participated in the orientation training programme for N.S. S. Programme officers organized by Rajagiri Institute of Social Sciences, Kalamasserry from 02.11.2016 to 09.11.2016.
9. Participated in 2 days foundation course in Neurolinguistic programming from 12.11.2016 -13.11.2016.
10. Presented paper in the two days UG sponsored National Seminar on ‘Current trends in Dementia Care’ organized by School of Gandhian Thought and Developmental Studies on 14th and 1th November 2016.
11. Organized Poster exhibition on December 1, 2016 in connection with the observance of World Aids Day.
12. Participated as resource person in the three day residential camp ‘ pournami ‘ at Model Residential School, Ettumanoor on 26.12.2016.
13. Participated in the three days nature camp at Edamalakkudy as Programme Officer, N.S.S, Campus Unit.
14. Organized and conducted seven days residential camp for volunteers of NSS Campus Unit from 23/12/2016 to 29/12/2016 at Mannakkanadu
15. Organized two day’s workshop on Research Methodology and Statistics on 16-17, January 2017.
16. Attended two weeks Faculty Development programme on e-content development from 16.01.2017 to 30.01.2017.
17. Organized and presented paper in three day’s International Conference on Inclusion- Beyond Borders, ICI 2017 in the School of Behavioural Sciences from 23rd to 25th February 2017.

18. Attended the University level meeting of N.S.S Programme officers on 27.02.2017.
19. Participated joint convener along with Archana Women's Centre, Ettumanoor in the student empowerment programme organized from 01.03.2017 at Modern Harijan Colony, Ettumanoor.
20. Organized One day Inter collegiate Seminar on Rights of Women in association with School of Behavioural Sciences, to observe the International Women's Day, on 07.03.2017 in the School of Behavioural Sciences as Programme Officer, N.S.S.
21. Attended State level meeting of N.S.S programme co-ordinator held at the office of the Higher Education Council, Trivandrum on 09.03.2017.
22. Participated and presented paper in the Three Day's International Residential Seminar on Yoga for All for Health for All, organized by the Centre for Yoga & Naturopathy, School of Gandhian Thought and Development Studies, Mahatma Gandhi University, on 10, 11 & 12 March 2017
23. Participated in one day campaign against drug abuse in the community on 18.03.2017 as programme officer, N.S.S.
24. Organized One day Seminar on Down Syndrome Day, on 21.03.2017, in the School of Behavioural Sciences.
25. Organized one day seminar on Inter collegiate seminar on drug abuse on 23.03.2017.
26. Coordinated 3 days 'Kalajadha' on Drug Abuse in various public places in Kottayam District from 16th to 18th April 2017.
27. Coordinated the conduct of One Day Training Programme of N S S Programme Officers on 15.05.2017.
28. Organized and conducted 'Anti Plastic Campaign' One Day Seminar on 'Environment Day' on 05.06.2017.
29. Organized and Conducted Training Programme for N S S Programme Officers on 8th and 9th June 2017.
30. Organized Inter Collegiate level Yoga Demonstration and Seminar on 21.06.2017.
31. Organized Training Programme for N S S Volunteers from 30.06.2017 to 07. 2017.

C. STUDENT ACTIVITIES/ACHIEVEMENTS

- **Ms. Rohini U. K. Nair**, Research Scholar in Rehabilitation Nursing has organized and conducted: Disability Awareness Campaign as a part of the '**Jyothirgamaya**' extension programme of the School in the following centres.
 1. Primary Health Centre, Veliyannoor, Koothattukulam on 17.08.2016.
 2. Primary Health Centre, Uzhavoor on 17.08.2016.
 3. Primary Health Centre, Kadaplamattam, Pala on 19.08.2016
 4. Primary Health Centre, Marangattupally on 22. 08.2016.
 5. General Hospital, Kanjirappally on 25.08.2016.
 6. Community Health Centre, Paika on 26.08.2016.
- **Mr. Ambady K.G.**, Research Scholar in Special Education has organized and conducted Disability Awareness Campaign as a part of the '**Jyothirgamaya**' extension programme of the School at Mahatma Gandhi University College of Teacher Education, Kudamaloor on 19.08.2016.
- **Dr. P. R. Jayakumar**, Research Scholar in Behavioural Medicine has organized and conducted Early Identification and Early Intervention programmes as a part of the '**Pratheeksha**' extension programme of the School in the following centres.
 1. Skill Development programme for ASHAs (Accredited Social Health Activists) of Kottayam District. Topic: 'Screening, Early Diagnosis, Early Intervention and Follow up of Major Congenital Anomalies', at National Health Mission Conference Hall, General Hospital Campus, Kottayam on 25.08.2016 and on 28.08.2016
 2. 'Screening, Early Diagnosis, Early Intervention and Follow up of Major Congenital Anomalies', at National Health Mission Conference Hall, General Hospital Campus, Kottayam on 28.08.2016
 3. Conducted Child Development Clinic in collaboration with Indian Academy of Paediatrics, District Early Intervention Centre, Kottayam at Paediatric House, Panampalam on 09.07.2016.
 4. Conducted Child Development Clinic in collaboration with Indian Academy of Paediatrics, District Early Intervention Centre, Kottayam at Paediatric House, Panampalam on 13.08.2016.
 5. Conducted Child Development Clinic in collaboration with Indian Academy of Paediatrics, District Early Intervention Centre, Kottayam at Paediatric House, Panampalam on 10.09.2016.

6. Conducted Medical Camp in Municipal areas of Changanassery for 'Screening of Disability in Children and Adults' under the auspices of National Urban Health Mission (NUHM), at NSS UP School, Puzhavathu, Changanassery on 01.09.2016.
7. Conducted Medical Camp in Municipal areas of Kottayam for 'Screening of Disability in Children and Adults' under the auspices of National Urban Health Mission (NUHM), at Zen Anganavadi, Pallipurathukavu, Kottayam on 07.09.2016.
8. Conducted Medical Camp in Municipal areas of Changanassery for 'Screening of Disability in Children and Adults' under the auspices of National Urban Health Mission (NUHM), at Parayil Anganavadi, Erupa, Changanassery on 29.09.2016.
9. An orientation programme on 'Epilepsy: Diagnosis, First Aid and Management'. Organized by Indian Academy of Paediatrics Neurology chapter, Kerala and Research Forum, School of Behavioural Sciences on 17.11.2016.
10. An orientation programme on 'Disability Rehabilitation and Management' on the occasion of International Day of Persons with Disabilities 2016. Organized by National Health Mission, Indian Academy of Pediatrics Neurology chapter, Kerala and Research Forum, School of Behavioural Sciences at General Hospital, Kottayam on 03.12.2016.
11. Organized and conducted one day Community Living Programme at Munnar Tea Estate on 17.12.2016.
12. Conducted Disability Screening and Medical Camp as a part of **Pratheeksha-an extension programme for Early Identification of Disabilities** organized jointly by Indian Academy of Pediatrics Neurology chapter, Kerala and Research Forum, School of Behavioural Sciences and Jyothis Special School, Kottayam at Viswabharathi Vidya Nikethan, Kavalam on 23.12.2016.
13. Organized and conducted Demonstration class on Cardio Pulmonary resuscitation at Santa Cruz, L.P School, Mannakkanadu on 25.12.2016 collaborating with NSS Campus Unit.
14. Organized Awareness classes on Disabilities as a part of **Jyothirgamaya** – An extension programme for dissemination of knowledge regarding disability identification, prevention and management at Santa Cruz, L.P School, Mannakkanadu on 28.12.2016 collaborating with NSS Campus Unit.

- **Mr. Aby Daniel**, Research Scholar in Special Education has organized and conducted Awareness Campaign and Skill development as a part of the ‘**Jyothirgamaya**’ and ‘**Nypunia**’ extension programmes of the School in the following centres.
 1. Conducted a session on “Brain Enhancement and Learning” in a seminar for School Children, organized by Sneha Bhavan, Kottayam on 06.05.2017.
 2. Handled a session on “Brain, Plastic Pollution and Learning” in a Seminar for School Children, organized by St. Alloysious Higher Secondary School, Athirampuzha on 13.05.2017.
 3. Lead a session on “Brain Enhancement and Learning” for School Students, organized by Sneha Bhavan, Kottayam on 13.05.2017.
 4. Organized a programme on “Effect of Psycho-physiological Stimulations on Brain and Learning” for Parents, organized by Elia Cathedral, Kottayam on 20.05.2017.
 5. Handled a session on “Effect of Psycho-physiological Stimulations on Brain and Learning” for Parents, organized by Vanitha Samajam, Puthupally Church on 27.05.2017.
 6. Lead a session on “Brain Enhancement for Professional Achievement” for 75 managers at “My Life Style Managers Meet”, a Multinational Marketing Firm at Kuttikanam on 03.06.2017.
 7. Handled a session on “Effect of Psycho-physiological Stimulations on Brain and Learning” for Parents, organized by M. G. M. Public School, Njaliyakuzhy on 10.06.2017.
 8. Lead a session on “Effect of Psycho-physiological Stimulations on Brain and Learning” for Parents, organized by Gregorian Public School, Puthupally on 17.06.2017.
 9. Handled a session on “Effect of Psycho-physiological Stimulations on Brain and Learning” for Parents, organized by Skyline Apartments, Kottayam on 26.06.2017.

D. RESEARCH OUTCOMES

List of Ph D Awarded

1. **Mr. M. Suresh Kumar, Ph. D. in Psychology**, on the topic 'Personality Profile Using Exner's Comprehensive System and Related Neurocognitive Function in Patients with Alcohol Dependence Syndrome'. (Supervising Teacher: **Dr. Rajeevkumar N.**)
2. **Dr. Babu George, Ph. D. in Behavioural Science**, on the topic 'A Study of Autism – Developing and Validating a Diagnostic Clinical Tool'. (Supervising Teacher: **Prof. Dr. M. S. Razeena Padmam**).
3. **Mr. Mammen Joseph C., Ph. D. in Psychology**, on the topic 'Marital Adjustment among IT Professionals in Kerala. (Supervising Teacher: **Prof. Dr. M. S. Razeena Padmam**).
4. **Sr. Simili P. Chacko, Ph.D in Special Education**, on the topic 'Satisfaction and problems of Special Teachers in Teaching children with autism, mental retardation and multiple disabilities. (Supervising Teacher: **Prof. P.S. Sukumaran**).
5. **Ms. Soya Sadanandan, Ph.D. in Behavioural Science**, on the topic 'Community Based Rehabilitation of Persons with Mental Retardation through Women Self Help Groups'. (Supervising Teacher: **Prof. P.S. Sukumaran**).
6. **Sr. Mini Mathew, Ph.D. in Special Education**, on the topic 'Functional Abilities and Problems of Adults with Intellectual Disability'. (Supervising Teacher: **Prof. P.S. Sukumaran**).
7. **Sr. Thressia P.A., Ph.D. in Psychology (Rehabilitation Nursing)**, on the topic 'An Experimental Study to test the Efficacy of Raw Diet and Yoga to control Type II Diabetes in different stages of disease process'. (Supervising Teacher: **Dr. Rajeevkumar N.**)
8. **Dr. Subhadra K.T. Ph.D. in Behavioural Medicine**, on the topic 'Medicinal and Placebo Effects of Homoeopathic Remedies – A Study on Patients with Somatoform Low Back Pain and Patients with Pathological Low Back Pain'. (Supervising Teacher: **Prof. M.S. Razeena Padmam**).
9. **Ms. Anu George, Ph. D. in Rehabilitation Nursing**, on the topic 'A Study on the Quality of Life of Children with Cerebral Palsy living in Kerala'. (Supervising Teacher: **Dr. Sr. Mary Lucita**).

10. Ms. Sandhya Govindan, Ph. D. in Special Education, on the topic ‘A Study on Sex Education Needs and Sex related Problems of Individuals with Mental Retardation’. (Supervising Teacher: **Prof. P.S. Sukumaran**).

- **List of Ph D Thesis submitted and awaiting result**

1. **Ms. Simmy M. Varkey, Ph. D. in Rehabilitation Nursing**, on the topic ‘Effect of Multimodal Wound Care Approach on Biobehavioural Distress among Clients with Diabetic Foot’. (Supervising Teacher: **Dr. Sr. Mary Lucita**).
2. **Ms. Suja Mathew, Ph. D. in Psychology**, on the topic ‘Conduct Disorder Therapy Protocol: An Intervention Study’. (Supervising Teacher: **Prof. Dr. C. Jayan**).
3. **Ms. Divya Rose Peter, Ph. D. in Psychology**, on the topic ‘Developmental level in relation to Nutritional Status, Family Environment and Socio Economic Status of Pre School Tribal Children in Kerala’. (Supervising Teacher: **Dr. Rajeevkumar N.**)
4. **Ms. Sreeja S., Ph. D. in Special Education**, on the topic ‘Efficacy of a Teacher Training Module in enhancing Teaching Skills of Primary School Teachers in an Inclusive Setting’. (Supervising Teacher: **Prof. Dr. M. S. Razeena Padmam**).
5. **Mr. Boban Eranimose, Ph. D. in Psychology**, on the topic ‘A Study on Dreams of Blinds’. (Supervising Teacher: **Dr. Rajeevkumar N.**)
6. **Ms. Nisha T. S., Ph. D. in Special Education**, on the topic ‘Psychosocial Study on Homosexuals with and without Hearing Impairment’. (Supervising Teacher: **Dr. P. T. Baburaj**).

- **List of Papers Published**

1. Mini Mathew & Sukumaran, P. S. (2017). Community Living Skills of Adults with Intellectual Disability. EDUAPEX, DSCE Explore Periodical, Vol. 3, Issue 2, pp.1-7.
2. Nisha, T. S., & Sukumaran, P. S. (2017). Awareness of Anganwadi Workers on the Early Identification of Childhood Disabilities. International Research Journal of Management Science & Technology, Vol.8, Issue &, pp. 128 – 133.

3. Eranimos, B. (2017). Pediswapnangale marikadakkam. *Arogyamangalam Health Magazine*, February, 2017.
4. Baburaj, P. T., & Vinu V Gopal. (2017). Care giver's Burden in Rehabilitation of Patients with Neurological deficits following Traumatic spinal cord injury. *The Journal of Spinal Surgery*, January-March 2017, 4(1)9-13.
5. Baburaj, P. T., & Suresh S. Vadakedam. (2017). Quality of life of mothers of children with down syndrome. *Journal of Evolution Med.Dent.Sd.*, 6 (36):2939-2942.
6. Varsha, V., Teena, M., and Sukumaran, P. S. (2016). Clinical Profile of Children with Intellectual Developmental Disorder – Institution Based Cross Sectional Study. *The International Journal of Indian Psychology*, Vol. 4, Issue 1, No. 81.
7. Mini Mathew and Sukumaran, P.S. (2016). Work related skills of adults with mild intellectual disability. *Disabilities and Impairments*, Vol. 30, No.1, pp. 21-27.
8. Nisha T.S & Baburaj, P.T. (2016). Psychological needs satisfaction of hearing impaired adolescents, *IRJMSH* Vol.7, Issue 5, ISSN 2277-9809 (online) 2348-9359 print.
9. Rajeev Kumar & Ameer Hassan (2016). Relationship between Styles of Thinking and Mental health among the Slow Learners, *LISSAH Journal*,2(2).
10. Rajeev Kumar & Chithra (2016) Socio-Economic Status of Urban Women under Kudumbashree Mission, *KILA Journal of Local Governance*, 3 (2).

- **Scientific Papers Presented by the Students and Teachers of the School in the International Conference on Inclusion- Beyond Borders (ICI 2017) organized by the School of Behavioural Sciences from 23rd to 25th February 2017.**

No	Name of Author	Topic
1	Geethu Prasad	Barriers of inclusive education
2	Sreeja S	Primary school teachers' attitudes towards persons with disabilities
3	Chothisha K S	Adjustment pattern of hearing impaired students in special and inclusive setting
4	Sruthi K Sneha Mohandas Dr. P S Sukumaran	Work readiness skill of individuals with mild intellectual disability
5	Rohini U K Nair Nikhil K P	Assess the level of stress among primary care givers of mentally challenged children in selected special schools of Kannur district Kerala with a view to develop an information booklet on coping strategies
6	Dr. Suresh S Vadakkedom Dr. P T Baburaj	Quality of life of mothers of children with down syndrome
7	Rincymol Mathew	Developmental Disabilities- A problem of high concern today
8	Aby Daniel Dr. P S Sukumaran	Importance of parent child relationship in early developmental stages of children with and without specific learning disability
9	Mnju P Emmanuel Dr. K M Mustafa	Study on anxiety and academic achievement of children with learning disabilities
10	Ameer Hassan Joshy C George Dr. Rajeev Kumar N	Self- esteem of under achievers and slow learners
11	Jibin George Dr. K M Mustafa	Can rapid automatized naming, phonological awareness and orthographic knowledge influence reading fluency in English?
12	Gayathri Devi	Temperament as a risk factor in social and academic achievement
13	Athira K Subhash	Dyslexia
14	Pima Molly Paul	Inappropriate behavior and modifying emotional behaviors of L.D Students
15	Anthony P M	A survey on the availability of electronics aids, musical instrument, audio aids and special play materials
16	Anjali K S	Sexual attitudes of adolescents with hearing impairment

	P T Baburaj	
17	Geetha Krishnan P T Baburaj	Awareness and attitude of members of panchayati Raj system in Kerala about the acts and policies for persons with disability in India
18	Dr. Vinu V Gopal Dr. P T Baburaj	Caregivers burden in patients with neurological deficit following traumatic spinal cord injury
19	Dr. Tony Jose	Efficacy of homeopathic approach on frustration tolerance among students with hearing impairment
20	Dr. Ajith Kumar	Health and Disability
21	Sulekha A T	Disability, CBR: An introduction to CBR
22	Jain P Johnson	Study on the difficulties in functional academics among children with L D
23	Sandhya Govindan	Sex education needs of individuals with ID: perception of special teachers
24	Boban Eranimos	(study on social intelligence)
25	Remya K Remanan	Attitude of special teachers towards integrated education of children with ID
26	Ambika E T	Study on anxiety and QOL among parents of primary school students with LD

- Scientific Papers Presented by the Students and Teachers of the School in the National Seminar on Locomotor Disabilities: Issues and Concerns organized by the School of Behavioural Sciences from 28th to 29th March 2017**

Sl.No.	Author	Title of Study
1	Boban Eranimos, Dr. Rajeev Kumar N	Drug Induced Motor disorders : Neuroleptic Malignant Syndrome : A Brief Review
3	Dr. K.K.Ramani	A case report of Osteo arthritis and its ayurvedic managements
4	Bijitha P.Y, Dr. P.T Baburaj	Perceived stress level of women with Loco motor disability.
5	Dr. P.S. Sukumaran	Disabilities – the issues and concerns
6	Rincymol Mathew	Disabilities – an overview.

International Workshop on Building up Research (IWBR-2013)

International Workshop on Building up Research was organized by School of Behavioural Sciences on 2013 August 12th & 13th. Workshop focused on the theme **Search, Research, Present, and Publish**. 50 participants participated. Dr. Jayadevan Sreedharan and Dr. Jayakumari Muttappallymyalil from The Gulf Medical University, Ajman and Dr. Elsheba Mathew From the School of Behavioural Sciences were the chief resource persons.

<p>Accommodation</p> <p>The school of Behavioural Sciences has arranged food for participants and university staff. Participants can make use of the nearby guest canteen for instant accommodation facilities in and around the campus.</p> <p>University Guest House 17, 1st floor Single Room: 200 Single A/C: 200 Double Room: 350/200 Double A/C: 400 3 Hallways: Attendants (Rs. 100/2000/20000) Non A/C: 1000/1500 A/C: 1500/2000</p> <p>3 Hallways: National Park, Valmiki Bldg, Rajawade Nagar, (2nd floor), P.O. 682 005 Phone: +91 483 2498111 Fax: +91 483 2498111 Email: hotel@mahatmauniversity.com Web: www.mahatmauniversity.com</p> <p>A 24x7 Junction, MCC, 24x7 Kannur, Chiruvu, Kerala For more details: 011-26368899 Email: hotel@mahatmauniversity.com</p> <p>HO: 10/24/2013 10 Road, Kottayam, Kerala For all other queries: For all queries: Email: info@mahatmauniversity.com SAC: 0482227222</p> <p>K 1 Road, Kottayam, Kerala - 686011 info@mahatmauniversity.com</p> <p>About the host organization</p> <p>School of Behavioural Sciences, established in 1998, is one of the top university departments in India that conducts higher education programmes, research and extension activities on mental health and disability. Mahatma School of Behavioural Sciences is an interdisciplinary department housing the branches: Education, Nursing, Special education, Psychology and Rehabilitation Sciences. The school aims to bring out professionals and researchers who have a holistic, innovative and integrated approach to work in the area of mental health and disability rehabilitation.</p>	<p>Registration form</p> <p>INTERNATIONAL WORKSHOP ON BUILDING UP RESEARCH</p> <p>Name: _____ Designation: _____ Institution: _____ Mailing Address: _____</p> <p>E-mail: _____ Payment Details (DD) <input type="checkbox"/> Online <input type="checkbox"/> DD Reference: _____ Number: _____ Bank: _____ Amount Rs: _____</p> <p>Date: _____</p> <p>The filled in registration form along with DD should be sent to: Dr. Jayadevan Sreedharan, IWBR, School of Behavioural Sciences, M.G. University, P.O. 11th PO, Athirampuzha, Kottayam, Kerala, Pin-686550.</p> <p>Organizing committee</p> <p>Organizing Chairperson Dr. A.V. George Hon. Vice-Chancellor, Mahatma School of Behavioural Sciences Mahatma University Changanassery Dist. Ernakulam, Kerala Mobile: 9846334822 Cell: 9846334822 Fax: 0482227222 Mobile: 9895461642</p> <p>Organizing Secretariat School of Behavioural Sciences Mahatma School of Behavioural Sciences P.O. 11th PO, Athirampuzha, Kottayam Phone No: 0482-2272222</p>	<p>IWBR 2013</p> <p>INTERNATIONAL WORKSHOP ON BUILDING UP RESEARCH</p> <p>THEME: SEARCH, RESEARCH, PRESENT, PUBLISH!</p> <p>2013 AUGUST 12-13</p> <p>Venue: MAHATMA GANDHI UNIVERSITY Athirampuzha, Kottayam</p>  <p>SCHOOL OF BEHAVIOURAL SCIENCES M.G. University, Kottayam</p>	<p>School of Behavioural Sciences is conducting a two day workshop on "Building up Research" on 12th & 13th August 2013. The aim of the workshop is to provide an overview of major concepts of research methodology through group activities and interactive sessions.</p> <p>Program content</p> <ol style="list-style-type: none"> 1. Research question and hypothesis 2. Application of research method 3. Literature review and outlining 4. Development of research proposal 5. Role of statistics in research 6. Developing Research communication <p>Sessions: Interactive lectures, Group and individual activities.</p> <p>Programme objectives</p> <p>At the end of the program, the participants will be able to:</p> <ul style="list-style-type: none"> ● Develop research question and hypothesis for a research problem ● Apply research designs appropriate to selected research questions in biomedical and behavioral sciences in the university research projects ● Develop methodology according to the selected research design with appropriate data management plan. ● Develop a research proposal outline based on related literature search ● Identify proper statistical tool for a given situation ● Perform basic steps in data management on a statistical package ● Interpret output from statistical software ● Design effective research presentation materials for scientific seminars and conferences ● Prepare research publication manuscript for submission to journals 	<p>Workshop facilitators</p> <p>Dr. Jayadevan Sreedharan, Ph.D. (Dr. CP), GDHPE, Professor of Biostatistics, Statistical Consultant Dr. Jayakumari Muttappallymyalil, M.D., Professor of Community Medicine, Research Supervisor Dr. Elsheba Mathew, M.D., MPH, GDHPE, Professor of Community Medicine, Faculty of Behavioural Sciences</p> <p>Participants</p> <p>Young scientists, Ph.D. Scholars & MPhil Students having background in Behavioral and Biomedical Sciences (Psychology, Special education, Medicine, Nursing and allied specialties, related social sciences) are expected to benefit through this workshop.</p> <p>Inauguration & Valedictory Speech</p> <p>Inauguration: Dr. A.V. George Vice-Chancellor, Mahatma Gandhi University, Kottayam.</p> <p>Valedictory Speech & Certificate Distribution: Dr. Sheena Shukkur Ph.D. Vice-Chancellor, Mahatma Gandhi University, Kottayam.</p>	<p>Registration fee</p> <p>The registration fee for the workshop is 1000/- per person. The registration fee includes entry to the workshop, morning, midday, tea, snacks and working lunch. *Seat availability must be confirmed before making payment since there are limited seats for this programme. The provided contact numbers can be used in the purpose.</p> <p>Mode of payment</p> <p>Payment can be made by Demand Draft or online. The DD should be in favour of "Convener, IWBR", payable to SEI, M.G. University, campus, Branch, Kottayam. Foreign participants can do spot registration. However, they have to send filled registration form early.</p> <p>Online payment details (Only for Indian Participants)</p> <p>Savings Bank Account No: 07518020098 Name of Bank: State Bank of Hyderabad, M.G. University Campus Branch Code: 3666 701861312, Hyderabad, Karnataka. Name of Account Holder: Convener, IWBR IFSC Code: SBHY0006699</p>
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SCHOOL OF BIOSCIENCES

A. Faculty participation in Conferences and Symposia

Dr. Keerthi T R

1. "Current Status of Functional Food/Nutraceuticals:What Obstruct R and D in Probiotics in India".International Seminar on Globalisation and India's Innovation System:A 'Creative Destruction'? "GIIS 2017"February 4-6 2017.Kottayam,Kerala,India(invited lecture)
2. GlindyaBhagya Lakshmi,.andKeerthi T. R. (2016). "Probiotics for organic aquafarming"International seminar on emerging trends in organic farming and sustainable agriculture "IUCOFSA 2016"held during 29-31st December2016 Mahatma Gandhi University,Kottayam,Kerala. Pp-77.Abstract only.
3. Keerthi T. R. (2016). " "Probiotic Fermentation Enhances the Multi Functionability of Aquafeed".International Conference on Science & Technology for National Development 25& 26th October,2016organized by KUFOS in association with indian Science Congress Association-Cochin Chapter Pp(invited lecture)
4. Athira Krishnan K.A&Keethi T.R(2016) "Anti cancer and antioxidant activities of theorganic extracts of the isolate MBTU SOLY1 isolated from the marine sponge ,Spongiasp".International Conference on "NextGenGenomes,Biology,Bioinformatics and Technologies (NGBT)".October 03-05 Cochin.Pp-160 Abstract only.
5. Honey C.Chandran, Keerthi.T.R (2016). "Intervention of probiotic Lactobacillus plantarum from Honey bee gut against Life style Diseases."International Conference on Nutraceuticals& chronic Diseases september 9-11,2016,Cochin,Kerala organized by Society of translational Cancer research &indianInstituteof technology(IIT) Guwahati,Assam,India.Pp-49(Abstract only)
6. GlindyaBhagya Lakshmi, Keerthi T.R.(2016) "Standardized method for maintaining viability and feed stability in probiotic based fish feed formulation" International conference on Towards a Sustainable Blue Economy: Production, Strategies and Policies" organized by KUFOS, Panangad, Kochi & Nansen Environmental Research Centre, India during 4-6 February 2016.Abstract Only

Dr. Anie Y.

7. Haritha V.H, Seena P, **Anie Y**, Role of monocytes in the clearance of NET (Neutrophil extracellular trap) and apoptotic bodies. In the proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30 January 2016, pp. 1447-1458.
8. Hazeena V.N., Soumiya C. K., **Anie Y.**, Comparatitive analysis of butanol: acetonitrile and acetonitrile fractions of *Vernonia anthelmintica* for possible aldose reductase inhibitory constituents. In the proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30 January 2016, pp. 1680-1691.
9. Hazeena V.N., Haritha V. H. , Jayachandran K., **Anie Y.**, Ethyl acetate fraction of *Vernonia anthelmintica (L.) Willd* contains Aldose reductase inhibitory molecules. In the proceedings of National Seminar on Plant Science Technology for Sustainable World, 25th and 26th February, 2016, pp. 55-59.
10. Shahana Shaji, Binchu V Shaji, Haritha V H, **Anie Y**.Glucose and Insulin as modulators of NETosis. In proceedings of 26th Swadeshi Science congress held at CMFRI, Cochin, 7-9 November 2016, pp. 159-160.
11. Surya P Rajendran, Jayachadran K, Anie Y. Liposome: A novel vehicle for the administration of fibrinolytic enzymes. . In proceedings of 26th Swadeshi Science congress held at CMFRI, Cochin, 7-9 November 2016, pp. 209.

Dr.Radhakrishnan EK

12. Shiji Mathew and Radhakrishnan E.K., Difference in antimicrobial mechanisms of silver nanoparticles synthesized by two different biogenic routes. National seminar on Recent Trends in Applied Life Sciences, March 15- 16,2017, School of Biosciences, Mahatma Gandhi University, Kottayam.
13. Rohini Sabu, and Radhakrishnan EK. National seminar on Recent Trends in Applied Life Sciences, March 15- 16,2017, School of Biosciences, Mahatma Gandhi University, Kottayam.
14. Roshmi Thomas and Radhakrishnan EK, Surface fabrication of urinary catheter using biosynthesized silver nanoparticles to combat colonization efficiency of Coagulase Negative *Staphylococci*. National seminar on Recent Trends in Applied Life Sciences, March 15- 16,2017, School of Biosciences, Mahatma Gandhi University, Kottayam.\
15. Snigdha.S, Nandhakumar Kalarikkal, Sabu Thomas and Radhakrishnan E.K. Effect of molecular interaction among components of nanocomposites on anti- Staphylococcal

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- 16.** Sunil MA, Sunitha VS, Radhakrishnan EK and **Jyothis Mathew** “Evaluatuion of immunostimulatory effects of *Acacia catechu* extracts in Mice” Proceedings of theNational Seminar on Plant Science Technology for sustainable world organised by National Institute of Plant Science Technology,Mahatma Gandhi University,Kottayam; Sponsored by Mahatma Gandhi University ,Kottayam & Kerala State Council for Science ,Technology & Environment on Feb25-26,2016 pp93-96 ISBN:978-81-930000-8-3

Dr M. S LATHA

- 17.** Helen RaisaLal, JayeshKuriakose, **M. S Latha**. “Prophylactic antioxidant study of the root bark of *Clerodendrum infortunatum L.*” at the two Day National Seminar on “Recent Trends in Applied Life Sciences” held at School of Biosciences, M. G University in March 2017.
- 18.** JayeshKuriakose,Helen RaisaLal, **M. S Latha**.“Terminaliabellica (Gaertn.) Roxbmitigates carbon tetrachloride induced hepatotoxicity in rats. at the two Day National Seminar on “Recent Trends in Applied Life Sciences” held at School of Biosciences, M. G University in March 2017.
- 19.** Helen RaisaLal, JayeshKuriakose, **M. S Latha**. “Aqueous Acetone Extract of the root bark of *Clerodendrum infortunatum L* mitigates carbon tetrachloride induced oxidative stress” at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.
- 20.** JayeshKuriakose,Helen RaisaLal, **M. S Latha**. Comparative antioxidant properties in the extracts of Terminaliabellica (Gaertn.) Roxb fruit – a component of Ayurvedic formulation ‘Triphala’. at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.
- 21.** Syama S, **M. S. Latha**. Secondary metabolites from leaves of *Eugenia uniflora L.* at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.

22. Helen Raisa Lal, Jayesh Kuriakose, M. S Latha. “Curative efficacy of *Clerodendrum infortunatum* L against CCl₄ induced epatic toxicity” at the 9th National Conference on New biological Researchers Opportunities and Challenges for Sustainable Development in August 2016 organized by School of Energy, Environment and Natural Resources. Madurai Kamaraj University and National Academy of Biological Sciences.

Dr. Jisha M S

23. **Smitha Vijayan** at Two Day National seminar on Recent Trends in Applied Life Sciences, for the paper entitled “ Antibacterial and antibiofilm activity of bio-AgNP and chitosan conjugated bio- AgNP” on March 15,16 2017 Sponsored by Mahatma Gandhi University, Kottayam.
24. **Smitha Vijayan** at International association of chemical, biological and medicinal sciences researchers, Dubai for the paper entitled **Synthesis, characterization and comparative antibacterial effect of silver nanoparticles and chitosan conjugated silver nanoparticles synthesized by endophytic *Colletotrichum gloeosporioides*** on 31st December 2016. **Best paper presentation award**
25. **Alan Thomas S** at International seminar on emerging trends in organic farming and sustainable agriculture for the paper entitled **Identification of tropical crop plants suitable for cultivation in Nedumbana Panchayat, Kollam district , Kerala based on the flowering plant flora of the Pazhangalam Muhurthy sacred grove** on 29th to 31st December 2016 **Best paper presentation award**
26. K. Divya, Smitha Vijayan, Elizabeth Mary John, and M.S. Jisha. Optimization of Chitosan Nanoparticle Synthesis and its Potential Application in Germination of *Oryza sativa* L. at **International association of chemical, biological and medicinal sciences researchers, Dubai** , 31st December 2016.
27. Smisha Lawrance, Smruthy M, Anto Joseph, Aju K Asok, Jisha M. S. ***Pseudomonas aeruginosa* H6 isolated from rhizosphere soil as a potent bio-herbicide candidate for weed control** at International seminar on emerging trends in organic farming and sustainable agriculture on 29th to 31st December 2016
28. Aswani P, Salini T.S and Jisha M.S. Characterization of bioactive metabolites of endophytic fungi *Fusarium solani* isolated From *Withania somnifera*. **5th International conference on Sustainable utilization of tropical plant Biomass: Bioproducts,**

Biocatalysts and Biorefinery (SutB4), 17-18 November 2016 at TNAU, Coimbatore.

29. Smitha vijayan and Jisha,M,S. Extracellular synthesis of silver nanoparticles by endophytic *Fusarium solani* from *Withania somnifera* and its antibacterial and cytotoxicity studies Proceedings of 4th International Conference on Nanotechnology and Basic Science (ICN2016), 4-5 February 2016, Dubai. Emirates
30. Divya K., Liya C. Kurian, Smitha Vijayan, Jisha M.S*.. Green Synthesis of Silver Nanoparticles by *Escherichia coli* and its Antibacterial Activity. Proceedings of 4th International Conference on Nanotechnology and Basic Science (ICN2016), 4-5 February 2016, Dubai. Emirates
31. Dhanya D.R, Dhanya S and JishaM.S. Fluorescent *Pseudomonas* mediated control of bacterial blight of anthurium. National Seminar on Plant science Technology for sustainable world at National Institute of Plant ScienceTechnology (NIPST), M.G. University, Kottayamon February 25th -26th 2016.
32. Divya K., Dhanya D.R., Dhanya S. and Jisha M.S. biocontrol activity of *pseudomonas fluorescens* against bacterial blight of anthurium caused by *xanthomonas axonopodis pv diffenbachiae*. National Institute of Plant ScienceTechnology (NIPST), M.G. University, Kottayamon February 25th -26th 2016.
33. **Divya R** and Jisha M.S. preliminary studies on isolation and characterization of microbial endophytes from selected medicinal plants in Kerala. National Institute of Plant ScienceTechnology (NIPST), M.G. University, Kottayamon February 25th -26th 2016.
34. Linu MS and Jisha MS. Phytohormone production and plant growth promoting potentials of phosphate solubilizing *Pseudomonas aeruginosa* isolated from chilli rhizosphere. National Institute of Plant ScienceTechnology (NIPST), M.G. University, Kottayam on February 25th -26th 2016.

Dr.Linu Mathew

35. Shajitha PP, Jomy Augustine, **Linu Mathew**. Molecular phylogeny of balsams based on combined sequences of nuclear ITS, Def1 and Def 2 regions;; 29th Kerala science congress proceedings pp. 229-234
- 36 Rshma John and **Linu Mathew** Mosquito larvicidal activity of phytoecdysteroid (20-hydroxyecdysone)against *Adesalbopictus* larvae.. National Seminar on Recent Trend in

Applied Life Sciences. March 15-16, School of Biosciences, M G University. ISBN 978-93-80419-30-5 pp 33-341st **prize in Oral presentation**

37. VinayaChandran, Shahena S and **Linu Mathew**. Enhancing the production of vasicine from cell suspension cultures of *Justiciaadhatoda*Lby supplementing L tryptophan,L – aspartic Acid.,National Seminar on Recent Trend in Applied Life Sciences. March 15-16, School of Biosciences, M G University,ISBN 978-93-80419-30-5 pp 49-50

B. ONGOING PROJECTS

1. **Jisha.M.S.** Bioremediation of Chlorpyrifos by autochthonous microbial consortia funded by KSCSTE (25 Lakhs)
2. **Keerthi.T.R.** ‘Exploration of honey bee gut microbiota for industrial and therapeutic applications’ (SB/EMEQ-137/2013) DST-SERB, New Delhi. 2013-2017.Amount: 30,36,400
3. **Dr. Radhakrishnan E.K.(Co-ordinator)** SARD Programme support from KSCSTE to School of Biosciences, Mahatma Gandhi University (21.25 Lakhs) (2014-2017).
4. **Dr. Radhakrishnan E.K.(Principal Investigator)** and Prof. (Dr.) Jyothis Mathew (Co-Investigator) Major Project from KSCSTE, 25 Lakhs, “Studies on molecular and chemical basis of plant growth promoting and anti-phytopathogenic properties of rhizosphere microorganisms” (2015 - 2018).
5. **Dr.J.G.Ray.** KCSTE Major Project (26.6 lakhs): Collection, identification and screening of green algae from bloomed water bodies of Kerala for quality of lipid (2015-2018) KCSTE No. 229/2015/KCSTE dated 23-06-2015
6. **Dr.Aniey.Y** Back to lab programme (13 Lakhs) Immunomodulatory effect of beta – glucan on neutrophil functions in Diabetes mellitus (NO 1368/2014/KSCSTE)
7. **Dr.Jayachandran.K.** Back to lab programme entitled “Identification, isolation and characterization of Acyl Homoserine Lactone-mimic compounds from selected plants”Kerala State Council for science, Technology and Environment (KSCSTE) for an amount of Rs. 6.9 lakhs(2015-2017).

Completed projects

Dr. Anie Y

1. UGC –MINOR RESEARCH PROJECT - Chemotactic response of human phagocytic cells (polymorphonuclear leucocytes and monocytes) in tuberculosis patients.[F.NO. 37/599/2009(SR)]- 2010-2012- Value 1,24000-

C. RESEARCH PUBLICATIONS

Dr. Keerthi. T.R.

1. Anu P Sebastian, Anjali Ann Jacob and Keerthi T R (2017) “Effect of probiotics from natural sources enhances humoral immunity” *Journal of Clinical Immunology & Research* (Accepted)
2. Anjali Anne Jacob, T.R. Keerthi and S.S. Resmi. (2017) “Phenotypic Safety Assessment and Molecular Characterization of *Enterococcus faecium* MBTU-P1F1 (KF745071) from Infant feces. *International Journal of Current Microbiology and Applied Sciences* ISSN: 2319-7706 Volume 6 Number 5 (2017) pp. 449-460.
3. Athira Krishnan K.A. & Keerthi T.R. (2016) Comparative Evaluation of Bioactivities of two Marine Sponges, *Zygomycalaparishii* and *Callyspongiadiffusa* from Southwest Coast of India *British Journal of Pharmaceutical Research* 11(1): 1-10, 2016, Article no. BJPR.24740 ISSN: 2231-2919, NLM ID: 101631759
4. Honey Chandran C., Meenu Das M. and Dr. Keerthi T. R. (2016) “Effect of prebiotics on synbiotic fermented milk” *World journal of pharmacy and pharmaceutical sciences*, Volume 5, Issue 2, 1557-1566
5. Honey Chandran C.1, Summaya Jauhara² and Dr. Keerthi T. R. (2016) “Probiotic effect of *bacillus coagulans*, mbtu-p1f2 from infant faeces with a known probiotic” *European journal of biomedical and pharmaceutical sciences* Volume 3, Issue 3, 298-304.
6. Athira Krishnan K.A. & Keerthi T.R. (2016) “Analyses of methanol extracts of two marine sponges, *Spongia officinalis* var. *ceylonensis* and *Sigmadociacarnosa* from Southwest coast of India for their bioactivities” *International Journal of Current Microbiology and Applied Sciences* ISSN: 2319-7706 Volume 5 Number 2 (2016) pp. 722-734 Journal homepage: <http://www.ijcmas.com>

Dr. Anie Y.

7. P. Sneha Sundaran, Aswathy Bhaskaran, Sherrin T. Alex, Tilak Prasad, V. H. Haritha, Y. Anie, T. V. Kumary and P. R. Anil Kumar. Drug loaded microbeads entrapped electrospun mat for wound dressing application. *Journal of Materials Science: Materials in Medicine*:2017, 28:88
8. Hazeena VN, Sruthi CR, Soumiya CK, Haritha VH, Jayachandran K, **Anie Y** . *Vernonia anthelmintica* (L.) Willd. Prevents Sorbitol Accumulation through Aldose Reductase Inhibition. *Scholars Academic Journal of Biosciences*: 4(10A); 787-795.
9. Surya PR, Liji L, Jayachandran K, **Anie Y**. Bacteria from South Indian Fermented Foods and Food- Waste Dump Sites as Sources of Fibrinolytic Enzymes. *Imperial Journal of interdisciplinary research* 2016: 2(7); 528- 536.

Dr. Radhakrishnan EK

10. Aswani R, Saji Varghese, **Radhakrishnan EK**, Biocontrol activity of the extract prepared from *Zingiber zerumbet* for the management of rhizome rot in *Zingiber officinale* caused by *Pythium myriotylum*, Accepted in *Archives Of Phytopathology And Plant Protection*
11. KR Soumya, Snigdha S, Sheela Sugathan , Jyothis Mathew and **EK Radhakrishnan**, Zinc oxide-Curcumin nanocomposite loaded collagen membrane as an effective material against methicillin resistant coagulase negative staphylococci, Accepted in **3 Biotech**.
12. Jimtha John C, Jyothis Mathew and Radhakrishnan EK, Bioengineering of *Dioscorea nipponica* with rhizospheric 24 *Proteus* spp. for enhanced tuber 25 size and diosgenin content. Accepted in **3 Biotech**.
13. Jasim B, Daya PS, Sreelakshmi KS, Sachidanandan P, Aswani R, Jyothis Mathew, Radhakrishnan EK, Bacopaside N1 biosynthetic potential of endophytic *Aspergillus* sp. BmF 16 isolated from *Bacopa monnieri*. Accepted in **3 Biotech**.
14. Jimtha John C, Jishma P, Karthika N R, Nidheesh K S, J G Ray, Jyothis Mathew and Radhakrishnan EK, *Pseudomonas fluorescens* R68 assisted enhancement in growth and fertilizer utilization of *Amaranthus tricolor* (L.) Accepted in **3 Biotech**.
15. Roshmi Thomas, Shiji Mathew, Nayana AR, Jyothis Mathews, and **Radhakrishnan E. K**, Microbially and phytofabricated AgNPs with different mode of bactericidal action were identified to have comparable potential for surface fabrication of central

venous catheters to combat *Staphylococcus aureus* biofilm, Accepted in **Journal of Photochemistry & Photobiology, B: Biology**

16. Rohini Sabu, Soumya KR, Radhakrishnan EK, Endophytic Nocardiosis sp. from *Zingiber officinale* with both antiphytopathogenic mechanisms and antibiofilm activity against clinical isolates Accepted in **3 Biotech**.
17. Jishma P, Nisma Hussain, Romy, Rakhie, Jyothis Mathew, **Radhakrishnan EK**, Strain specific variation in plant growth promoting volatile organic compound production by five different *Pseudomonas* spp. as confirmed by response of *Vigna radiata* seedlings(Accepted in **Journal of Applied Microbiology**.
18. Aswani R and **Radhakrishnan E.K**, Plant beneficial mechanisms and applications of endophytic bacteria, Review, Accepted in **BAOJ Microbiology**
19. Jimtha John C, Jishma .P, Sreelekha S., Chithra S Radhakrishnan E.K., Antifungal properties of prodigiosin producing rhizospheric *Serratia* sp. Accepted in **Rhizosphere, 2017**.
20. Anisha C, **Radhakrishnan E.K** Metabolite analysis of endophytic fungi from cultivars of *Zingiber officinale* Rosc. identifies myriad of bioactive compounds including tyrosol Accepted in **3 Biotech**.
21. Chithra S, Jasim B, , Mathew J, **Radhakrishnan EK** Endophytic *Phomopsis* sp. colonization in *Oryza sativa* was found to result in plant growth promotion and piperine production"- Accepted in **Physiologia Plantarum**
22. Roshmi Thomas, Jishma P and **Radhakrishnan EK** "Photocatalytic and antibacterial effects of Silver nanoparticles fabricated by *Bacillus subtilis* SJ15. Accepted in **Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry**.
23. Snigdha S, Sabu Thomas, **Radhakrishnan EK** (2017) Polymer Based Tissue Engineering Strategies for Neural Regeneration. **Adv Tissue Eng Regen**, Med Open Access 2(1): 00016. 2017, 2(1): 00016, DOI: 10.15406/atroa.2017.02.00016- Mini Review
24. Soumya KR , Sheela Sugathan, Suja Varghese, Jyothis Mathew, **Radhakrishnan EK** Virulence factors associated with coagulase negative staphylococci isolated from human infections. Accepted in **3 Biotech**.
25. **Mini K.D, Mini K.Paul, Radhakrishnan E.K and Jyothis Mathew** Characterization of Keratinase from *Aspergillus flavus* S125 International Research Journal of Natural and Applied Sciences Vol. 3, Issue 10, October 2016

26. Rohini Sabu and **E.K. Radhakrishnan**. Bioprospecting of Endophytic Bacteria from *Zingiber officinale* with Antibacterial Activities. *Int.J.Curr.Microbiol.App.Sci.* 5(9): 462-467.
27. Snigdha, Shiji Mathew, Nandakumar K, Sabu Thomas, **Radhakrishnan EK**, Antimicrobial, antibiofilm and microbial barrier properties of poly (ϵ -caprolactone)/cloisite 30B thin films **3Biotech**, 2016 Dec; 6(2): 249.
28. Jasim B, Sreelakshmi S, Jyothis Mathew and **Radhakrishnan EK**. “Bioactive peptide biosynthesis by endophytic *Bacillus mojavensis* from *Bacopa monnieri*” **3Biotech**, 2016 Dec; 6(2): 187.
29. Jimtha , **Radhakrishnan EK**, Multipotent plant probiotic rhizobacteria from Western Ghats, its effect on quantitative enhancement of medicinal natural product biosynthesis **Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.** (2016). doi:10.1007/s40011-016-0810-3.
30. Soumya KR , Sheela Sugathan, Jyothis Mathew, **Radhakrishnan EK** Studies on co-existence of mec gene, IS256 and novel sasX gene among human clinical coagulase negative staphylococci , **3Biotech**, 2016 Dec; 6(2): 233.
31. Jasim B, Roshmi Thomas, Jyothis Mathew and **Radhakrishnan EK**. Plant growth and diosgenin enhancement effect of silver nanoparticles in Fenugreek (*Trigonella foenum-graecum* L. **Saudi Pharmaceutical Journal.** <http://dx.doi.org/10.1016/j.jsps.2016.09.012>
32. Jimtha John C, Jishma P, Arathy G B, Anisha C, **Radhakrishnan EK** (2016) “Identification of plant growth promoting rhizosphere *Bacillus* sp. WG4 antagonistic to *Pythium myriotylum* and its enhanced antifungal effect in association with *Trichoderma* sp.” - **Journal of Soil science and plant nutrition**, ol.16 no.3 Temuco set. 2016, doi.org/10.4067/S0718-95162016005000026
33. Ouseph Varghese, Neethu Sahadevan, **Radhakrishnan EK**, Jyothis Mathew (2016) Antifungal effect of *Zingiber zerumbet* extract and its compatibility with tobacco decoction-a biopesticide **International Journal of Advanced research** 4(2) 455-460.
34. Sunitha V.S., Sunil M.A., **Radhakrishnan EK**, Jyothis Mathew, Immunomodulatory activity of *Vetiveria zizanioides* extract on peritoneal macrophages of albino mice (2015) **International Journal for Pharmaceutical Research Scholars** ISSN No: 2277 – 7873 V4 1-4
35. Sunitha V S, Sunil M A, **Radhakrishnan EK**, Jyothis Mathew, Immunomodulatory Activity of *Caesalpinia sappan* L. Extracts on Peritoneal

macrophage of Albino Mice,2015)**International Journal of Science and Research** (IJSR) ISSN: 2319-7064.

36. V.S.Sunitha,M.A.Sunil, **Radhakrishnan EK** and Jyothis Mathew “Invitro and In vivo immunomodulatory effects of thirist quenchers of Kerala on murine peritoneal macrophages” (2014) **Nepal Journal of Epidemiology** 4(2) ISSN 2091-0800
37. Jasim B, Jyothis Mathew, **Radhakrishnan EK**, “Identification of a Novel endophytic *Bacillus* sp. from *Capsicum annuum* with highly efficient and broad spectrum plant probiotic effect” - **Journal of Applied Microbiology**. 2016 Oct;121(4):1079-94. doi: 10.1111/jam.13214. Epub 2016 Aug 9
38. 44. Jishma, Roshmi Thomas, Rakhie, **Radhakrishnan EK**, “Exploration of Photocatalytic Properties of Microbially Designed Silver Nanoparticles on Victoria Blue B” **Bioprocess and Biosystem Engineering**,2016, 10.1007/s00449-016-1581-1.
39. Jasim B, Rosemin Benny, Rohini Sabu, Jyothis Mathew, **Radhakrishnan EK** “Metabolite and mechanistic basis of antifungal property exhibited by endophytic *Bacillus amyloliquefaciens* BmB 1, **Appl Biochem Biotechnol**, 2016: 1-16.
40. Jasim B, Sreelekshmi, Jyothis Mathew, **Radhakrishnan EK** “Surfactin, Iturin and Fengycin biosynthesis by endophytic *Bacillus* sp from *Bacopa monnieri*” . **Microbial Ecology**,2016, 10.1007/s00248-016-0753-5
41. KR Soumya, Shiji Mathew, Sheela Sugathan, Jyothis Mathew and **Radhakrishnan EK**, “Studies on prevalence of biofilm associated genes and primary observation on sasX gene in clinical isolates of Coagulase negative staphylococci”. **Acta Pathologica Microbiologica Scandinavica**. 2016 Apr;124(4):319-26.

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42. Mini K.D. and **Jyothis Mathew (2016)** Purification of keratinase from *Aspergillus flavus*S125.*Journal of Microbiology and Biotechnology Research* 6(1) 17
43. A.Vysakh a , Nair R Raji a , MS Latha a,* , **Mathew Jyothis(2016)**;Traditional and Therapeutic Importance of *Rotula aquatica* Lour.: An Overview *International Journal of Pharmacy and Pharmaceutical Research* Vol. 7 (3): 97-107 (ISSN2349-7203)
44. Mini.k.d, sampathkumar s , and jyothis mathew (2017) dehairing of cattle hide by keratinase enzyme of *aspergillus flavus* s125 *Int J Pharma Bio Sci* 8(3): (B) 204-209 ISSN 0975-6299

Dr M. S Latha

45. Jyothilakshmi, Madhavankutty, Mathew Jyothis, and **MukalelSankunniLatha**. "MikaniaMicrantha—a Natural Remedy to Skin Infections." *Int. J. Curr. Microbiol. App. Sci* 5.2 (2016): 742-745.
46. Jyothilakshmi, Madhavankutty, Mathew Jyothis, and **MukalelSankunniLatha**. "Anti-inflammatory efficacy of the rhizome of Zingiberzerumbet—an in vitro study using THP1 cell line." *Journal of Medicinal Plants* 4.1 (2016): 103-106.
47. Helen, LalRaisa, KuriakoseJayesh, and **M.S. Latha**. "Safety assessment of aqueous acetone extract of Clerodendruminfortunatum L. in Wistar rats." *Comparative Clinical Pathology*: 2016.1-7.
48. KuriakoseJayesh, LalRaisa Helen, EldhoseBinil and **M.S. Latha**. Comparative Antioxidant Properties of Terminaliabellirica (Gaertn.) Roxb. Fruit Extract: A Component of Ayurvedic Formulation 'Triphala'. *International Journal of Pharmacy and Pharmaceutical Research*, 2016; Vol. 7 (4): 310-320.
49. Vysakh A, Suma D, Syama S, Raji R Nair, Jyothis Mathew, **Latha MS**. Role of NF- κ B Signaling Pathway and Oxidative Stress in Liver Inflammation. *Austin Hepatology*. 2016; 1(1): 1004.
50. Jyothilakshmi, Madhavankutty, et al. "Antidermatophytic and protease-inhibiting activities of zerumbone: A natural sesquiterpene from the rhizome of Zingiberzerumbet (L.) Roscoe ex JE; Smith." *Pharmacognosy Magazine* 13.49 (2017): 2.
51. Suma D, Vysakh A, **Latha MS**. Molecular pathways in non-alcoholic fatty liver disease an emerging menace: A mini review. *Austin Hepatology*. 2017; 2(1): 1005.
52. KuriakoseJayesh, LalRaisa Helen, AVysakh, EldhoseBinil, **M.S. Latha**. In vivo Toxicity evaluation of aqueous acetone extract of *Terminaliabellirica* (Gaertn.) Roxb. Fruit. *Regulatory Toxicology and Pharmacology* 86 (2017) 349-355.
53. Vysakh A, Raji R Nair, Suma D, JayeshKuriakose, Jyothis Mathew, **Latha MS**. Role of antioxidant defence, renal toxicity markers and inflammatory cascade in disease progression of acute pyelonephritis in experimental rat model. *Microbial Pathogenesis*. 109. (2017) pp. 189-194.
54. KuriakoseJayesh, LalRaisa Helen, AVysakh, EldhoseBinil, **MS Latha**. *Terminaliabellirica* (Gaertn.) Roxb. fruit mitigates CCl₄ induced oxidative stress and hepatotoxicity in rats. *Biomedicine and pharmacotherapy*. (2017); 93:327-333.

Dr. Prakash Kumar B

55. Mohan MC, Abhimannue AP, **Prakash KB**. Identification and characterization of berberine in *Tinospora cordifolia* by liquid chromatography quadrupole time of flight mass spectrometry (LC MS/MS Q-tof) and evaluation of its anti inflammatory potential. **Pharmacog J. 2017;9(1):73-82.**
56. Jenny Jacob, Bashi M. Babu, Mohind C. Mohan, Anu P Abhimannue, **B. Prakash Kumar**. Inhibition of proinflammatory pathways by bioactive fraction of *Tinospora cordifolia* . **Feb 2017 • Inflammopharmacology**
57. Dhanya Krishnan Radhakrishnan, Sunitha Mary Chacko, **Prakash Kumar Bhaskara**, Sukumaran Sandya, Nevin Kottayath Govindan. Polyphenolic extract from coconut kernel modulates apoptotic genes, reactive oxygen species production, and prevent proliferation of human colon cancer cell line. **International Journal of Clinical and Experimental Physiology Accepted: 9th September, 2016**
58. Anu P. Abhimannue, Mohind C. Mohan, Esha Kuriakose, **Prakash Kumar B**. *In silico* screening of bioactive molecules from *Elephantopus scaber* Linn. for binding with cardiac potassium ion channels, Kir2.1 and Kir3.1,. Accepted for publication in International Journal of Practical Biochemistry and Biophysics Vol 1 Issue 1; 2016
59. Chinmayee Acharya, Chitta R. Panda, **B. Prakash Kumar**, Abhisek Sasmal, Suman Shekhar, Akhil K. Sen. Physicochemical and antimicrobial properties of sodium alginate/gelatine based silver nanoformulations. **Polymer Bulletin Accepted 30 June 2016 DOI 10.1007/s00289-016-1738-8**
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Dr. Jisha M S

61. Divya K, Kurian LC, Vijayan S, Jisha MS (2017) Antimicrobial Properties of Chitosan Nanoparticles: Mode of Action and Factors Affecting Activity. **Fibers and Polymers. Vol.18, No.2, 221-230. Impact factor 1.113**

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63. **Smitha Vijayan, K. Divya, Elizabeth Mary John, M.S. Jisha** .Synthesis, characterization and comparative antibacterial effect of silver nanoparticles and chitosan conjugated silver nanoparticles synthesized by endophytic *Colletotrichum gloeosporioides*- - International Association of Chemical, Biological & Medical Sciences Researchers (CBMSR) Dubai (UAE) Dec. 30-31, 2016.
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66. Devi Rajan^a; Tijith Kuzhiyil George^a; Dibu Divakaran^a; Sharrel Rebello^a and Jisha manakulam shaikmoideen^a (2016).*Biomodulatory role of Enterobacter sp-* a novel bacterial endophyte of Sida cordifolia and its comparative analysis with plant extract.Journal of biologically active products from nature
67. Smitha Vijayan, Divya K, Tijith K. George, Jisha M.S (2016).Antibacterial and cytotoxicity studies of silver nanoparticles synthesized by endophytic *Fusarium solani* isolated from withania somnifera (L). Water Environ. Nanotechnol., 1(2): 91-103, Autumn 2016
68. K.S Rishad, Sharrel Rebello, Vinod Kumar Nathan, S Shabanamol and M.S Jisha,(2016) Biocontrol potential of halotolerant bacterial chitinase from high yielding novel Bacillus pumilus MCB-7 autochthonous to mangrove ecosystem. Pesticide biochemistry and physiology. **Impact factor 2.590**
69. Vinod Viswanath,Vincent Vineeth Leo, Sabna Prabha S, V P Pottyand Jisha M.S (2016). Optimized production of tannase from cashew testa using Aspergillus niger MTCC 5898". Food Biotechnology. **Impact factor 0.814.**
70. Divya K, Kurian LC, Vijayan S, Jisha MS, Green synthesis of silver nanoparticles by Escherichia coli : Analysis of antibacterial activity. J. Water Environ. Nanotechnol., 2016; 1(1): 63-74, DOI: 10.7508/jwent.2016.01.008
71. Smitha Vijayan, Divya K, Tijith K. George, Jisha M.S. **Biogenic synthesis of silver nanoparticles using endophytic fungi *Fusarium oxysporum* isolated from *Withania***

Somnifera, its antibacterial and cytotoxic Activity. journal of bionanoscience.10 (5).2016

72. Elizabeth Mary Johnand Jisha M.S (2016). Optimization of chlorpyrifos degradation by assembled bacterial consortium using response surface methodology. **Soil and sediment contamination** .Accepted The publishers, Taylor & Francis. **Impact factor 1.189**
73. Sharrel rebello, Biljo Joseph, Sunil Joseph, Leny Jose, Sathish Mundayoor, Jisha M.S, Bioconversion of sodium dodecyl sulfate to rhamnolipids by transformed Escherichia coli DH5 α cells – a novel strategy for rhamnolipid synthesis. **Journal of Applied Microbiology**. **impact factor 2.49**
74. K.S Rishad, Sharrel Rebello, Vinod Kumar Nathan, S Shabanamol and M.S Jisha, Optimised production of chitinase from a novel mangrove isolate, bacillus pumilus MCB-7 using response surface methodology, **Biocatalysis and Agricultural Biotechnology**, <http://dx.doi.org/10.1016/j.bcab.2016.01.009>
75. Dhanya, j Sreekumar, Jisha M.S (2016), Evaluation of antagonistic potential and Induction of flowering in Anthurium Andreanum L. by indegenous Pseudomonas taiwanensis. **International Journal of Agriculture Innovations and Research 4 (4), 760-766**

Dr.Linu Mathew

76. Shajitha, N. R. Dhanesh, P. J. Ebin, Laly Joseph, AneeshaDevassy, Reshma John, Jomy Augustine, **Linu Mathew** Molecular Phylogeny of Balsams (Genus Impatiens) Based on ITS Regions of Nuclear Ribosomal DNA Implies Two Colonization Events in South India, P. P.. Journal of Applied Biology and Biotechnology ISSN Print:2455-7005 ISSN Online: 2347-212X Journal of Applied Biology & Biotechnology Vol. 4 (06), pp. 001-009, Nov-Dec, 2016 Available online at <http://www.jabonline.in> .DOI: 10.7324/JABB.2016.40601
77. A Combined Chloroplast *atpB-rbcL* and *trnL-F* Phylogeny Unveils the Ancestry of Balsams (*Impatiens* spp.) in the Western Ghats of India. P. P. Shajitha · N. R. Dhanesh· P. J. Ebin· Joseph Laly · DevassyAneesha · John Reshma · Jomy Augustine· **MathewLinu**. DOI: 10.1007/s13205-016-0574-8 3Biotech Springer (published) Impact factor. 1(Thomson Reuters)

78. John Reshma, **Mathew Linu**, Endophytic Fungal Assemblage in *Achyranthes aspera* Linn. Revealed by Internal Transcribed Spacer Region of Nuclear Ribosomal RNA genes" (DOI: 10.1007/s13205-017-0748-z) **3 Biotech Springer (published) Impact factor. 1 (Thomson Reuters)**

Dr. J G Ray

79. Mariamma Jacob, **J G Ray** and M M Mathew (2016) Institutional Initiative for Sustainable Development - A Critical Analysis, LISSAH Journal, pp. 91-104
80. Santhosh Kumar K, S Prasanthkumar, **J G Ray** (2016) Experimental Assessment of Productivity, Oil-yield and Oil-profile of Eight Different Common Freshwater-blooming Green Algae of Kerala, Biocatalysis and Agricultural Biotechnology, doi <http://dx.doi.org/10.1016/j.bcab.2016.10.007>
81. Binoy T T and **J G Ray** (2016) Diversity and Ecology of Diatoms in *Oxic Dystrustepts* soils under three different vegetation of the Western Ghats, Kerala, South India The Journal of Ecology. Photon 111, pp. 465-475
82. Soumya S. and **J. G Ray** (2016) Silver nanoparticles synthesized using aqueous leaf extracts of *Ziziphus oenplia* (L.) Mill: Characterization and assessment of antibacterial activity, Journal of Photochemistry & Photobiology, B: Biology 163, pp. 391–402

E content development

1. SLO on Animal

Cloning http://www.mguniversity.edu/index.php?option=com_content&view=article&id=1713&Itemid=1845

Conference Proceedings

Dr. Keerthi T R

1. "Current Status of Functional Food/Nutraceuticals: What Obstruct R and D in Probiotics in India". International Seminar on Globalisation and India's Innovation System: A 'Creative Destruction'? "GIIS 2017" February 4-6 2017. Kottayam, Kerala, India (invited lecture)
2. Glindya Bhagya Lakshmi, and Keerthi T. R. (2016). "Probiotics for organic aquafarming" International seminar on emerging trends in organic farming and sustainable agriculture "IUCOFSA 2016" held during 29-31st December 2016 Mahatma Gandhi University, Kottayam, Kerala. Pp-77. Abstract only.

3. Keerthi T. R. (2016). “ “Probiotic Fermentation Enhances the Multi Functionability of Aquafeed”.International Conference on Science & Technology for National Development 25& 26th October,2016organized by KUFOS in association with indian Science Congress Association-Cochin Chapter Pp(invited lecture)
4. Athira Krishnan K.A&Keethi T.R(2016) “Anti cancer and antioxidant activities of theorganic extracts of the isolate MBTU SOLY1 isolated from the marine sponge ,Spongiasp”.International Conference on “NextGenGenomes,Biology,Bioinformatics and Technologies (NGBT)”.October 03-05 Cochin.Pp-160 Abstract only.
5. Honey C.Chandran, Keerthi.T.R (2016). “Intervention of probiotic Lactobacillus plantarum from Honey bee gut against Life style Diseases.”International Conference on Nutraceuticals& chronic Diseases september 9-11,2016,Cochin,Kerala organized by Society of translational Cancer research &indianInstituteof technology(IIT) Guwahati,Assam,India.Pp-49(Abstract only)
6. GlindyaBhagya Lakshmi, Keerthi T.R.(2016) "Standardized method for maintaining viability and feed stability in probiotic based fish feed formulation" International conference on Towards a Sustainable Blue Economy: Production, Strategies and Policies" organized by KUFOS, Panangad, Kochi & Nansen Environmental Research Centre, India during 4-6 February 2016.Abstract Only

Dr. Anie Y.

7. Haritha V.H, Seena P, **Anie Y**, Role of monocytes in the clearance of NET (Neutrophil extracellular trap) and apoptotic bodies. In the proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30 January 2016, pp. 1447-1458.
8. Hazeena V.N., Soumiya C. K., **Anie Y.**, Comparatitive analysis of butanol: acetonitrile and acetonitrile fractions of *Vernonia anthelmintica* for possible aldose reductase inhibitory constituents. In the proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30 January 2016, pp. 1680-1691.
9. Hazeena V.N., Haritha V. H. , Jayachandran K., **Anie Y.**, Ethyl acetate fraction of *Vernonia anthelmintica (L.) Willd* contains Aldose reductase inhibitory molecules. In the proceedings of National Seminar on Plant Science Technology for Sustainable World, 25th and 26th February, 2016, pp. 55-59.

10. Shahana Shaji, Binchu V Shaji, Haritha V H, **Anie Y.** Glucose and Insulin as modulators of NETosis. In proceedings of 26th Swadeshi Science congress held at CMFRI, Cochin, 7-9 November 2016, pp. 159-160.
11. Surya P Rajendran, Jayachadran K, Anie Y. Liposome: A novel vehicle for the administration of fibrinolytic enzymes. . In proceedings of 26th Swadeshi Science congress held at CMFRI, Cochin, 7-9 November 2016, pp. 209.

Dr. Radhakrishnan EK

12. Shiji Mathew and Radhakrishnan E.K., Difference in antimicrobial mechanisms of silver nanoparticles synthesized by two different biogenic routes. National seminar on Recent Trends in Applied Life Sciences, March 15- 16, 2017, School of Biosciences, Mahatma Gandhi University, Kottayam.
13. Rohini Sabu, and Radhakrishnan EK. National seminar on Recent Trends in Applied Life Sciences, March 15- 16, 2017, School of Biosciences, Mahatma Gandhi University, Kottayam.
14. Roshmi Thomas and Radhakrishnan EK, Surface fabrication of urinary catheter using biosynthesized silver nanoparticles to combat colonization efficiency of Coagulase Negative *Staphylococci*. National seminar on Recent Trends in Applied Life Sciences, March 15- 16, 2017, School of Biosciences, Mahatma Gandhi University, Kottayam.\
15. Snigdha.S, Nandhakumar Kalarikkal, Sabu Thomas and Radhakrishnan E.K. Effect of molecular interaction among components of nanocomposites on anti- Staphylococcal activity. National seminar on Recent Trends in Applied Life Sciences, March 15- 16, 2017, School of Biosciences, Mahatma Gandhi University, Kottayam.

Dr. Jyothis Mathew

16. Sunil MA, Sunitha VS, Radhakrishnan EK and **Jyothis Mathew** “Evaluation of immunostimulatory effects of *Acacia catechu* extracts in Mice” Proceedings of the National Seminar on Plant Science Technology for sustainable world organised by National Institute of Plant Science Technology, Mahatma Gandhi University, Kottayam; Sponsored by Mahatma Gandhi University ,Kottayam & Kerala State Council for Science ,Technology & Environment on Feb 25-26, 2016 pp 93-96 ISBN: 978-81-930000-8-3

Dr M. S Latha

17. Helen RaisaLal, JayeshKuriakose, **M. S Latha**. “Prophylactic antioxidant study of the root bark of *Clerodendrum infortunatum L.*” at the two Day National Seminar on “Recent Trends in Applied Life Sciences” held at School of Biosciences, M. G University in March 2017.
18. JayeshKuriakose, Helen RaisaLal, **M. S Latha**. “Terminalia bellerica (Gaertn.) Roxb mitigates carbon tetrachloride induced hepatotoxicity in rats. at the two Day National Seminar on “Recent Trends in Applied Life Sciences” held at School of Biosciences, M. G University in March 2017.
19. Helen RaisaLal, JayeshKuriakose, **M. S Latha**. “Aqueous Acetone Extract of the root bark of *Clerodendrum infortunatum L* mitigates carbon tetrachloride induced oxidative stress” at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.
20. JayeshKuriakose, Helen RaisaLal, **M. S Latha**. Comparative antioxidant properties in the extracts of Terminalia bellerica (Gaertn.) Roxb fruit – a component of Ayurvedic formulation ‘Triphala’. at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.
21. Syama S, **M. S. Latha**. Secondary metabolites from leaves of *Eugenia uniflora L.* at the 26th Swadeshi Science Congress in November 2016 organized by Swadeshi Science Movement at Central Marine Fisheries Research Institute, Kochi.
22. Helen RaisaLal, JayeshKuriakose, **M.S Latha**. “Curative efficacy of *Clerodendrum infortunatum L* against CCl₄ induced hepatic toxicity” at the 9th National Conference on New biological Researchers Opportunities and Challenges for Sustainable Development in August 2016 organized by School of Energy, Environment and Natural Resources. Madurai Kamaraj University and National Academy of Biological Sciences.

Dr. Jisha M S

23. **Smitha Vijayan** at Two Day National seminar on Recent Trends in Applied Life Sciences, for the paper entitled “Antibacterial and antibiofilm activity of bio-AgNP and chitosan conjugated bio-AgNP” on March 15,16 2017 Sponsored by Mahatma Gandhi University, Kottayam.
24. **Smitha Vijayan** at International association of chemical, biological and medicinal sciences researchers, Dubai for the paper entitled **Synthesis, characterization and**

comparative antibacterial effect of silver nanoparticles and chitosan conjugated silver nanoparticles synthesized by endophytic *Colletotrichum gloeosporioides* on 31st December 2016. Best paper presentation award

25. **Alan Thomas S** at International seminar on emerging trends in organic farming and sustainable agriculture for the paper entitled **Identification of tropical crop plants suitable for cultivation in Nedumbana Panchayat, Kollam district , Kerala based on the flowering plant flora of the Pazhangalam Muhurthy sacred grove** on 29th to 31st December 2016 **Best paper presentation award**
26. K. Divya, Smitha Vijayan, Elizabeth Mary John, and M.S. Jisha. Optimization of Chitosan Nanoparticle Synthesis and its Potential Application in Germination of *Oryza sativa* L. at **International association of chemical, biological and medicinal sciences researchers, Dubai** , 31st December 2016.
27. Smisha Lawrance, Smruthy M, Anto Joseph, Aju K Asok, Jisha M. S. ***Pseudomonas aeruginosa* H6 isolated from rhizosphere soil as a potent bio-herbicide candidate for weed control** at International seminar on emerging trends in organic farming and sustainable agriculture on 29th to 31st December 2016
28. Aswani P, Salini T.S and Jisha M.S.Characterization of bioactive metabolites of endophytic fungi *Fusarium solani* isolated From *Withania somnifera*.**5th International conference on Sustainable utilization of tropical plant Biomass: Bioproducts, Biocatalysts and Biorefinery (SutB4), 17-18 November 2016 at TNAU, Coimbatore.**
29. Smitha vijayan and Jisha,M,S. Extracellular synthesis of silver nanoparticles by endophytic *Fusarium solani* from *Withania somnifera* and its antibacterial and cytotoxicity studies Proceedings of 4th International Conference on Nanotechnology and Basic Science (**ICN2016**), **4-5 February 2016, Dubai. Emirates**
30. Divya K., Liya C. Kurian, Smitha Vijayan, Jisha M.S*.. Green Synthesis of Silver Nanoparticles by *Escherichia coli* and its Antibacterial Activity. Proceedings of 4th **International Conference on Nanotechnology and Basic Science (ICN2016), 4-5 February 2016, Dubai. Emirates**
31. Dhanya D.R, Dhanya S and Jisha M.S. Fluorescent *Pseudomonas* mediated control of bacterial blight of anthurium. National Seminar on Plant science Technology for sustainable world at National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam February 25th -26th 2016.

32. Divya K., Dhanya D.R., Dhanya S. and Jisha M.S. biocontrol activity of *pseudomonas fluorescens* against bacterial blight of anthurium caused by *xanthomonas axonopodis* pv *differenbachiae*. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam February 25th -26th 2016.
33. **Divya R** and Jisha M.S. preliminary studies on isolation and characterization of microbial endophytes from selected medicinal plants in Kerala. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam February 25th -26th 2016.
34. Linu MS and Jisha MS. Phytohormone production and plant growth promoting potentials of phosphate solubilizing *Pseudomonas aeruginosa* isolated from chilli rhizosphere. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam on February 25th -26th 2016.

Dr.Linu Mathew

35. Shajitha PP, Jomy Augustine, **Linu Mathew**. Molecular phylogeny of balsams based on combined sequences of nuclear ITS, Def1 and Def 2 regions;; 29th Kerala science congress proceedings pp. 229-234
- 36 Rshma John and **Linu Mathew** Mosquito larvicidal activity of phytoecdysteroid (20-hydroxyecdysone) against *Ades albopictus* larvae.. National Seminar on Recent Trend in Applied Life Sciences. March 15-16, School of Biosciences, M G University. ISBN 978-93-80419-30-5 pp 33-34 **1st prize in Oral presentation**
37. Vinaya Chandran, Shahena S and **Linu Mathew**. Enhancing the production of vasicine from cell suspension cultures of *Justicia adhatoda* L by supplementing L tryptophan, L – aspartic Acid., National Seminar on Recent Trend in Applied Life Sciences. March 15-16, School of Biosciences, M G University, ISBN 978-93-80419-30-5 pp 49-50

Dr.J.G.Ray

38. Invited Speaker, National seminar on Wet Land Conservation, 01-02-2017, SVR NSS College, Vazhoor
39. Invited Speaker, ‘Pharma Excellence’ International Seminar on Pharmacy Education’ – Programme for Faculty Improvement , Government Medical College, Kottayam Topic: ‘What is good Research?’ Date of presentation: 25-05-2017

Book Chapter published

1. Cloning of Animals: Techniques and applications, DrLinu Mathew, Associate Professor, School of Biosciences, M G university (EdsDr R vijayakumar, DrSajimon Abraham, DrSajna Jaleel) E- Learning instructional designs for Short learning objects. pp 47-51.ISBN 978-93-80419-29-9 Publisheed by Printing and publishing division Mahatma Gandhi university Kottayam Kerala
2. S Syama, LalRaisa Helen, MK Preetha,AVysakh, **MS Latha**.“Functional benefits of *Eugenia uniflora*L.”.*Advances in Functional Foods for Human Health*. Apple Academic Press, USA. (In Press).
3. R.N Raji, AVysakh,MK Preetha, D Suma,**M.S Latha**. Chapter on“Phytochemicals from traditional medicinal plants”.*Advances in Functional Foods for Human Health*. Apple Academic Press, USA.(In Press).
4. D. Suma, A. Vysakh, R.N. Raji, NinanJisha, **M.S. Latha**.“functional benefits of *Ficushispida* L.”. *Advances in Functional Foods for Human Health*. Apple Academic Press, USA. (In Press).
5. RL Helen, K Jayesh, S Syama, M. S Latha. “Functional potential of *Clerodendruminfortunatum* L: A traditional Herb.” *Advances in Functional Foods for Human Health*. Apple Academic Press, USA. (In Press).

No of conference organised by the institution

1. National workshop on “ Advanced statistical tool & softwares for biological research”. School of Biosciences, Mahatma Gandhi University. Sep27-Oct 1 2016.
2. Two day National seminar on Recent trends in applied Life Sciences. School of Biosciences, Mahatma Gandhi University. Mar 15 and 16, 2017.
3. Institutional level two day seminar on “**Prevention & management of lifestyle diseases**” jointly organized with School of Biosciences & Department of student services (DSS) of M.G.University on 17 th& 18th March,2016.
4. .2 day Workshop on “Student to Entrepreneur” Idea for Life Science Students Organized by Placement Cell – School Of Biosciences In association with Merit Biolabs, Cochin.27th&28th October 2016

No. of faculty served as experts, chairpersons or resource persons

Keerthi.T.R

1. Director, School of Biosciences, Mahatma Gandhi University ,17-08-2015 onwards
2. Member Academic Council-Mahatma Gandhi University
3. Chairperson, PhD Doctoral Committee of Biosciences
4. Convenor, Expert committee of M.Sc.Biotechnology, Mahatma Gandhi University
5. Member, Board of Studies, (Biosciences), Mahatma Gandhi University.
6. Member, Board of studies Microbiology (PG) Mahatma Gandhi University
7. Member Board of Studies, (Microbiology PG&UG), Kannur University
8. University Nominee Governing body of St.Albert College, Ernakulam (Autonomous)
9. Subject Expert Women back to lab programme KSCSTE Thiruvananthapuram
10. Member, (former & present) Anti harrasment Cell Mahatma Gandhi University.
11. Member (Former & Present) SC/ST monitoring cell of Mahatma Gandhi University
12. Member Institutional Biosafety Committee, Mahatma Gandhi University
13. Former Convener expert committee of B.Sc., Biotechnology, Mahatma Gandhi University
14. Former Warden, Ladies Hostel, Mahatma Gandhi University..
15. Former Member Institutional Ethical Committee, Mahatma Gandhi University.
16. Former Member, Board of Studies PG, (Microbiology), Calicut University
17. Member, Board of question paper setters and examiner in Biotechnology, Kannur University.
18. Member, Board of question paper setters and examiner in Biotechnology and Microbiology (B.Sc., M.Sc and MPhil), Calicut University.

19. Member, Board of question paper setters in Biotechnology(M.Sc&B.Sc) Kerala University.
20. Member, Board of question paper setters and examiner in Biotechnology (MSc,Mphil&Ph.D. qualifying), Cochin University of Science and Technology.
21. P.T.A Secretary ,School of Biosciences-2013-2015 batch
22. Departmental Co-coordinator UGC remedial coaching -2013-2015.

Membership in Scientific Societies

- International Probiotics Association (IPA), Zurich, Switzerland
- Asian Federation of Biotechnology (AFOB), Korea
- Indian Dairy Association (IDA), New Delhi
- Society for Biotechnology (India)
- Association of Microbiologist in India (AMI), India
- Kerala Science Academy.

Editorial Board Member – Iranian Journal of Biotechnology

Dr.Jisha

1. Member Kerala academy of Science
2. Member – Board of Studies in Microbiology, Calicut University
3. Member – Board of Studies in Microbiology, M.G. University
4. Subject Expert – Board of Studies in Microbiology, SB College,Changanassery
5. Member, Board of Studies, (Biosciences), Mahatma Gandhi University.
6. Member, Board of studies Microbiology (PG) Mahatma Gandhi University
7. Member Board of Studies, (Microbiology PG&UG), Kannur University
8. Subject Expert Women back to lab programme KSCSTE Thiruvananthapuram
9. Member Institutional Biosafety Committee, Mahatma Gandhi University
10. Member, Board of question paper setters and examiner in Biotechnology, Kannur University.
11. Member, Board of question paper setters and examiner in Biotechnology and Microbiology (B.Sc.,M.Sc), Calicut University.

12. Member, Board of question paper setters in microbiology (M.Sc&B.Sc) Kerala
13. Member, Board of question paper setters and examiner in Biotechnology (MSc), Cochin University of Science and Technology.
14. P.T.A Secretary ,School of Biosciences-2014-2016 batch
15. Membership in Scientific Societies
16. Society for Biotechnology (India)
17. Association of Microbiologist in India (AMI), India
18. Kerala Science Academy.
19. Member Society for Fisheries Technologist (India)
20. Member Indian Science Congress Association

Dr.Aniey

1. Member- Board of studies, M.Sc Microbiology, Mahatma Gandhi University
2. Member- Expert committee, M.Sc Biochemistry, Mahatma Gandhi University
3. Member- Board of studies, Biotechnology, Kannur University
4. Member – Board of question paper setters Kannur University.
5. Member – Board of question paper setters, University Of Calicut.
6. Member – Board of question paper setters University Of Kerala.
7. Member- Board of examination, M.Sc Biochemistry, Mahatma Gandhi University.
8. Member – Animal ethical committee, M G University, Kottayam.
9. Member – Biosafety committee, M G University, Kottayam
10. Faculty –in-charge of Animal House, M G University, Kottayam

Dr,Jyothis Mathew

1. Chairman,Board of Studies (UG) in Microbiology Mahatma Gandhi University, Kottayam
2. Chairman,Board of Studies (PG) in Microbiology Mahatma Gandhi University, Kottayam
3. Member, Board of Studies in Biosciences, Mahatma Gandhi University, Kottayam
Chairman, Core Committee in Medical Microbiology (UG&PG Combined

No. of research awards/ recognitions received by faculty and research fellows

1. Mosquito larvicidal activity of phytoecdysteroid (20-hydroxyecdysone) against *Ades albopictus* larvae. Rshma John and **Linu Mathew**. National Seminar on Recent Trend in Applied Life Sciences. March 15-16, School of

Biosciences, M G University. ISBN 978-93-80419-30-5 pp 33-341st **prize in Oral presentation**

2. Best paper award in the National seminar on Plant Science Technology for Sustainable World, conducted at the School of Biosciences, Mahatma Gandhi University on - **Hazeena V. N**
3. 2016: **Young scientist award for the best paper** for **Rohini Sabu** and **Dr.Radhakrishnan EK** in the National seminar on Diversity of Microbes and Climate Change mitigation held during 3rd-5th February 2016 organized by Catholicate College, Pathanamthitta.
4. 2016: **Best paper award** for **Jimtha John C** and **Dr.Radhakrishnan EK** In UGC Sponsored National seminar on progress and prospects of Biotechnology, at St. Josephs College, Irinjalakuda on 14th and 15th January ,2016.
5. 2016: **Best Poster Award** for **Anisha C** and **Dr.Radhakrishnan EK** at the International Seminar on Emerging Trends in Organic Farming and Sustainable Agriculture organized by IUCOFSA, Mahatma Gandhi University, on 29th 31st Dec,2016
6. 2017 : **Second prize for paper presentation** for **Snigdha .S** and **Dr.Radhakrishnan EK** at National seminar on Recent Trends in Applied Life Sciences, March 15-16,2017, School of Biosciences, Mahatma Gandhi University, Kottayam
7. **Smitha Vijayan** at International association of chemical, biological and medicinal sciences researchers, Dubai for the paper entitled **Synthesis, characterization and comparative antibacterial effect of silver nanoparticles and chitosan conjugated silver nanoparticles synthesized by endophytic *Colletotrichum gloeosporioides*** on 31st December 2016. **Best paper presentation award**

No. of Ph.D. awarded by faculty from the Institution --18

Dr.Linu Mathew

1. Production of 20- hydroxycedysone from *in vitro* cultures of *Achyranthesaspera* Linn(Reshma John)
2. Molecular phylogenetic relationships among *Impatiens L.* (Balsaminaceae) Using Chloroplast And Nuclear regions (Shajitha PP)

3. Phylogeny of Indian clariids and population genetic structure of *Clarias dussumieri* using molecular markers (Aneesha Devassy)

Dr. Jyothis Mathew

4. Antidermatophytic compounds from *Zingiber zerumbet* (L.) Roscoe ex J.E.; Smith and *Mikania micrantha* by Jyothilakshmi M. (under co-guidance) (2016)

5. Microbial Keratinases-Isolation, Purification and Characterization by Mini K.D. (2016)

Dr. M.S. Latha

6. A comparative study of natural and adulterated toddy--- R Rajalekshmi.

7. Biochemical studies on *Heracleum candolleanaum* (Wight et Arn.) Gamble-- Hemand Aravind

8. Evaluation of anticancer and antioxidant activity of *Plumbago indica*.—Binil Eldhose

Dr. Jisha

9. Isolation and molecular characterization of tannase enzyme produced from cashew testa by using *Aspergillus niger* - Vinod Viswanath 2016

10. Bioprospecting Endophytic Diazotrophic *Lysinibacillus sphaericus* for Biocontrol of rice sheath blight (Shabanamol S). 2016

11. Biocontrol of chilli anthracnose caused by *Colletotrichum capsici* with phosphate solubilizing *Pseudomonas aeruginosa* isolated from chilli rhizosphere. Linu M. Salim 2016.

12. Isolation, molecular characterization and enzyme bioprospection of chitinolytic bacteria associated with Valanthakad mangrove ecosystem (Rishad K.S) 2017

13. *Pseudomonas taiwanensis* (MTCC 11631) mediated control of Anthurium blight caused by *Xanthomonas axonopodis* pv. *dieffenbachiae* (Dhanya S), 2017

Dr. Radhakrishnan

14.: “Biomedical applications of microbially fabricated silver and gold nanoparticles” (Ph.D awarded) – 2016--Roshmi Thomas

15. “Functional analysis and applications of endophytic bacteria from selected spice plants” (Ph.D awarded)- 2017 -- Jasim B

16.. “Studies on plant growth promoting properties and applications of PGPR isolates from western ghat” (Ph.D awarded) - 2017 -- Jimtha John C

17 “Molecular investigation on species diversity, antibiotic resistance and biofilm formation among coagulase negative Staphylococci” (Ph.D awarded).- 2017 -- Soumya K R

18. “Bioprospecting of endophytic fungi from different cultivars of *Piper nigrum*” (Ph.D awarded).- 2017 --Chithra S

Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

1. .Participation of Community Health programme Organized by Nava Jeevan Trust in association with M.G.University,N.S.S Unit 2ndFebruvary 2017.
2. Participation of Kerala Science Congress National Science Exhibition at marthoma college ,Thiruvalla during 26-30thJanuvary 2017.
3. Conducted Inter collegeus Quiz Competition and Food Fest in connection with Biofest On March 21st to 23 rd 2017.
4. Visit to Najeevan trust a house for mentally illconducted an awareness programme Bodhani about Healthy Life Style. Awareness programme on Cyber Crime, A public seminar on prevention on cruelty against animals.

SCHOOL OF CHEMICAL SCIENCES

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
11	2	5	4	

2.2 No. of permanent faculty with Ph.D.

10

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
			2		1				

2.4 No. of Guest and Visiting faculty and Temporary faculty

	3	
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2.5 Faculty participation in conferences and symposia:

No. of Faculty	International Level	National Level	State Level
Attended			
Presented	5	20	
Resource Persons			

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
MSc Inorganic Chemistry	8	0	1	5	2	100
MSc Organic Chemistry	7	0	1	3	3	100
MSc Physical Chemistry	8	0	1	4	3	100
MSc Polymer Chemistry	7	0	1	4	2	100
MPhil Inorganic Chemistry	3	0	2	0	0	100

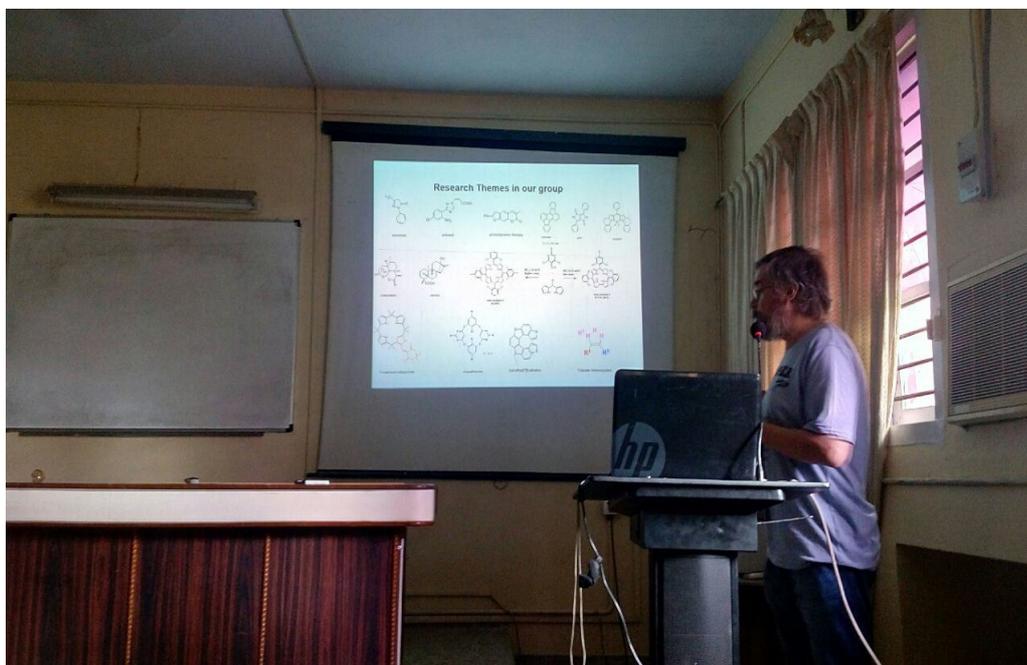
MPhilOrganic Chemistry	4	0	2	2		100
MPhilPhysical Chemistry	3	0	0	2	1	100
MPhilPolymer Chemistry	3	0	0	1	2	100
PhD	8					

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	3	1	0	0
Technical Staff	11	0	0	0

During 2016 - 2017 the School has organized several invited lectures, workshops and Lecture series

1. Prof. Wim Dehan, Professor , KU Leuven, Belgium, has delivered the talk on “Hyperbranched Polymers based on Isatin and Electron Rich Arenes : Synthesis and Applications"” in the seminar hall ,school of chemical sciences on 28.12.2016



2. An interesting lecture on “ Responsible Development of Innovation..How to



5. Workshop on Molecular Spectroscopy : Theory and Application ,
Prof .S.Sugunan ,Department of Applied Chemistry ,CUSAT ,Kochi
has Delivered the talk on spectroscopy



6. Colloquium on Spectroscopy: Theory and Applications, Dr. Anilkumar G., Associate Professor, School of Chemical Sciences, M.G. University, Kottayam has served as Academic Coordinator for the colloquium



7. LINUS PAULING Lecture series

The School of Chemical Sciences has instituted a lecture series in memory of late Professor Linus Pauling, a colossus in chemistry and irrepensible crusader of modern times. Twice Nobel Prize Awardee, Linus Pauling was clearly the greatest chemist of the 20th century and founder of modern molecular biology

School of Chemical Sciences has honoured Dr. E .D Jemmis , Professor of Theoretical Chemistry ,Indian Institute of Science ,Bangalore and former Director, Indian Institute of Science Education and Research ,Trivandrum (IISER-TVM) with the Linus Pauling Lecture Award 2016 on 7th October ,2016 in recognition of his outstanding contributions in Theoretical Chemistry .Prof. Jemmis has delivered a lecture on A Structural Chemistry for Boron : Boropherene, Borophene and Electron Counting Rules .



8. To inculcate an aptitude for science among school children, 'one day in the campus' programme was organized which include workshop and interaction with an eminent scholar. Students from nearby government schools are invited for this programme.



9. Exhibition for childrens of the neighborhood school on Basic concepts in chemistry



10. Quiz competition for students from various affiliated colleges. Dr. E .D Jemmis, Professor of Theoretical Chemistry ,Indian Institute of Science ,Bangalore, distributed the prizes for winners in Quiz Competition



Awards Recived by Faculty Members

3.17 No. of research awards/ recognitions received by faculty and research fellows
Of the institute in the year

Total	International	National	State	University	Dist	College
9	5	2	1	1		

- 1 Rudolph A Marcus Award 2016 in Chemical Sciences by Lognor, Publishers of Science Advances Today (Prof. Suresh Mathew)
- 2 Second prize in the Evonik Industries Chemistry Research Proposal competition ECRP 2016, Germany (Dr. G. Anilkumar).
- 3 Dr. S. Vasudev Memorial Prize in 2017 for best research work from the Kerala State Council for Science, Technology and Environment. (Dr.G Anilkumar)

Prof.Sabu Thomas

- 4 Awarded *Loyalty Award “International Materials Technology Conference Exhibition” May 2016*& Honourable member of IMTCE, Loyalty Award Club (Membership Number -IMTCE-LC-017)
- 5 Awarded Dr. APJ Abdul Kalam Award for Scientific Excellence – 2016
- 6 Mahatma Gandhi University- Award for Outstanding Contribution –Nov. 2016
- 7 Awarded *Lifetime Achievement Award, Indian Nanobiologists 2017*
- 8 Awarded *Doctorate Honoris Causa-Université de Lorraine France 2017*
- 9 Selected for the *Fullbright scholarship-Nehru* –Fulbright fellowship for 2017.

3.7 No. of books published i) With ISBN No. Chapters in Edited Books
ii) Without ISBN No.

Books Published 2016-2017

1. **Handbook of Nanocellulose and Cellulose Nanocomposites, 2 Volume Set**
Kargarzadeh, H., Ahmad, I., Thomas, S., & Dufresne, A. (Eds.). (2017).. John Wiley & Sons.
2. **Nanocelluloses as Innovative Polymers for Membrane Applications**, Gopakumar D. A , Thomas. S, Grohens. Y, Multifunctional Polymeric Nanocomposites Based on Cellulosic Reinforcements (2016), DOI: 10.1016/B978-0-323-44248-0.00008-0

3. **Rheology and Processing of Inorganic Nanomaterials and Quantum Dots/Polymer Nanocomposites.** , Mohan, S., Abraham, J., Oluwafemi, O. S., Kalarikkal, N., & Thomas, S. *Rheology and Processing of Polymer Nanocomposites* (2016). 355-382.
4. **Starch based biocomposites.** *Green Polymer Composites Technology: Properties and Applications*, Balakrishnan, P., Thomas, S., & Sreekala M.S., (2015). Vol 1, ISBN: 9781498715461 | 149871546X, published by CRC Press, USA.
5. **Natural fibre and polymer matrix composites and their applications in aerospace engineering.** Balakrishnan, P., M. J. John, L. Pothen, M. S. Sreekala, and S. Thomas. *Advanced Composite Materials for Aerospace Engineering: Processing, Properties and Applications* (2016): 365. <http://dx.doi.org/10.1016/B978-0-08-100037-3.00012-2>
6. **Nanomedicine: From Concept To Reality.** Rakhimol, Kr, Robin Augustine, Sabu Thomas, And Nandakumar Kalarikkal *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 1.
7. **Tissue Engineering: Principles, Recent Trends And The Future**, Mathew, Ansuja P., Robin Augustine, Nandakumar Kalarikkal, And Sabu Thomas. *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 31.
8. **Electrospun Matrices For Biomedical Applications: Recent Advances.** Mohanan, Deepa P., Robin Augustine, Nandakumar Kalarikkal, Ek Radhakrishnan, And Sabu Thomas *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 365.
9. **Diffusion, transport, and barrier properties of IPNS, Wilson, Runcy, S. Anil Kumar, Miran Mozetič, Uroš Cvelbar, and Sabu Thomas.** "Micro-and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications (2016): 319.
10. **Micro and nano-structured interpenetrating polymer networks: state of the art, new challenges, and opportunities.** James, Jose, George V. Thomas, H. Akhina, and Sabu Thomas. *Micro-and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications* (2016): 1
11. **Biodegradable green Composites.** Gopi, Sreerag, Anitha Pius, and Sabu Thomas *Biodegradable Green Composites* (2016): 1.

12. Biomedical Applications of Polyolefins Joshy, K. S., Pothen, L. A., & Thomas, S. (2016).. In *Polyolefin Compounds and Materials* (pp. 247-264). Springer International Publishing.

Book Chapters 2016-17

- 1. Rheology and Processing of Inorganic Nanomaterials and Quantum Dots/Polymer Nanocomposites.** , Mohan, S., Abraham, J., Oluwafemi, O. S., Kalarikkal, N., & Thomas, S. *Rheology and Processing of Polymer Nanocomposites* (2016). 355-382.
- 2. Multilayer Bottles.** In *Multicomponent Polymeric Materials* Vasudeo, R. A., Ajitha, A. R., Patil, S. S., Kanny, K., & Thomas, S. (2016). (pp. 325-348). Springer Netherlands.
- 3. Multilayer Polymer Films.** In *Multicomponent Polymeric Materials* Ajitha, A. R., Aswathi, M. K., Maria, H. J., Izdebska, J., & Thomas, S. (2016). (pp. 229-258). Springer Netherlands.
- 4. Interfacial Compatibilization of Multilayered Products.** Abitha, V. K., Priya, S. L., Jadhav, S., & Thomas, S. (2016) In *Multicomponent Polymeric Materials* (pp. 369-381). Springer Netherlands.
- 5. Multilayer Nanowires and Miscellaneous Multilayer Products.** In *Multicomponent Polymeric Materials* Ajitha, A. R., Sari, P. S., Maria, H. J., & Thomas, S. (2016). (pp. 383-410). Springer Netherlands.
- 6. Polymer Films for Packaging.** In *Encyclopedia of Polymeric Nanomaterials* (pp. 1-8). Balakrishnan, P., Thomas, M. S., Pothen, L. A., Thomas, S., & Sreekala, M. S. (2014). Springer Berlin Heidelberg DOI: 10.1007/978-3-642-36199-9_406
- 7. Starch based biocomposites.** *Green Polymer Composites Technology: Properties and Applications* (in press) Balakrishnan, P., Thomas, S., & Sreekala M.S., (2015). <https://www.crcpress.com/Green-Polymer-Composites-Technology-Properties-and-Applications/Inamuddin/> Vol 1, ISBN: 9781498715461 | 149871546X, published by CRC Press, USA.
- 8. Natural fibre and polymer matrix composites and their applications in aerospace engineering.** Balakrishnan, P., M. J. John, L. Pothen, M. S. Sreekala, and S. Thomas. *Advanced Composite Materials for Aerospace Engineering: Processing, Properties and Applications* (2016): 365. <http://dx.doi.org/10.1016/B978-0-08-100037-3.00012-2>

9. **Nanomedicine: From Concept To Reality.** Rakhimol, Kr, Robin Augustine, Sabu Thomas, And Nandakumar Kalarikkal *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 1.
10. **Tissue Engineering: Principles, Recent Trends And The Future,** Mathew, Ansuja P., Robin Augustine, Nandakumar Kalarikkal, And Sabu Thomas. *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 31.
11. **Electrospun Matrices For Biomedical Applications: Recent Advances.** Mohanan, Deepa P., Robin Augustine, Nandakumar Kalarikkal, Ek Radhakrishnan, And Sabu Thomas *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 365.
12. **Diffusion, transport, and barrier properties of IPNS, Wilson, Runcy, S. Anil Kumar, Miran Mozetič, Uroš Cvelbar, and Sabu Thomas..**"*Micro- and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications* (2016): 319.
13. **Micro and nano-structured interpenetrating polymer networks: state of the art, new challenges, and opportunities.** James, Jose, George V. Thomas, H. Akhina, and Sabu Thomas. *Micro- and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications* (2016): 1
14. **Biodegradable green Composites.** Gopi, Sreerag, Anitha Pius, and Sabu Thomas *Biodegradable Green Composites* (2016): 1.
15. **Biomedical Applications of Polyolefins** Joshy, K. S., Pothan, L. A., & Thomas, S. (2016).. In *Polyolefin Compounds and Materials* (pp. 247-264). Springer International Publishing.

Conference organized

1. National Colloquium in Organic and Bioorganic Chemistry organized by
2. SRIBS held at Kottayam on 29-31 July 2016 ,National.
3. National Colloquium in Organic and Bioorganic Chemistry organized by SRIBS held at Kottayam on 29-31 July 2016
4. National Colloquium in Catalysis-Emerging Trends organized by SRIBS held at Kottayam on 1 October 2016
5. National Colloquium in Catalysis-Emerging Trends organized by SRIBS held at Kottayam on 1 October 2017

6. National Seminar on Modern Trends in Chemistry and Polymer Chemistry
Organized by Government College Attingal on 25 November 2016
7. National Symposium on Celebrating 25 years of harmony with Organic Chemistry
CYHOC 2016 held at Trivandrum on 17 December 2016

Ongoing Research Projects

1.	“Propellant Burn rate modifiers (PI: Prof. Suresh Mathew, CoPI: Dr. P. Radhakrishnan Nair)	2016-18	ISRO	19.20
2.	“Study of fundamental Chemical and Physical properties of magnetic ionic liquid nanofluids”. collaboration with Department of Physics, Rzeszow University of Technology, Poland (PI: Prof. Suresh Mathew)	2015-17	DST, Govt. of India & (funding agency in Poland)	5.10
			Total	24.3

Publications 2016-2017

3.4.Details on research publications

	International	National	Others
Peer Review Journals	94	2	
e-Journals			
Conference proceedings	30		

1. *Synthesis, Characterization and Studies of Chemically Modified Poly(Acrylonitrile-Butadiene-Styrene) through Nitrile Functionalization* Elssa George, Remyasree Rajan, P.R. Sruthi, Jomon Joy and S. Anas. *Sanathanam academic Review*, Vol 1, Issue 1, Page 1-6, (2017 January).
2. Synthesis of diaryl and arylalkyl sulfides via zinc-catalyzed thioetherification reactions A. P. Thankachan, K. S. Sindhu, K. K. Krishnan, G. Anilkumar, *The Chemist* **2016**, 89 (2), 9. IP; 0.7
3. Recent advances in the transition metal catalyzed etherification reactions K. K. Krishnan, S. M. Ujwaldev, K. S. Sindhu, G. Anilkumar *Tetrahedron* **2016**, 72, 7393. IP: 2.7
4. Experimental and Mechanistic Exploration of Zn-Catalyzed Sonogashira-type Cross-Coupling Reactions A. P. Thankachan, T. G. Abi, K. S. Sindhu, Anilkumar *ChemistrySelect* **2016**, 1, 3405.
5. Iron-Catalyzed Sonogashira Type Cross-Coupling Reaction of Aryl Iodides with Terminal Alkynes in Water under Aerobic Conditions K. S. Sindhu, A. P. Thankachan, A. M. Thomas, G. Anilkumar *ChemistrySelect*, **2016**, 3, 556
6. Multiwalled carbon nanotubes with surface grafted transition state analogue imprints as chymotrypsin mimics for the hydrolysis of amino acid esters: Synthesis and kinetic studies Christy Philip K.S. Devaky *Molecular Catalysis* 436 (2017) 276–284 . ISSN: 2468-8231 IP :3.958
7. Effect of reaction conditions in the reduction of carbonyl group using polymer anchored Ethylenediamine–Borane reducing agent:, K. Rajasree, E. P Aparna and K. S. Devaky *J. Chem. Pharm. Res.* 9(1), 54-60 (2017). ISSN: 0975-7384. IP: 0.543
8. Phosphonate TSA-built macromatric polymer catalysts as chymotrypsin mimics for the amidolysis of amino acid p-nitroanilides:-Effect of the nature and extent of crosslinker on amidase activities:, Divya Mathew, Benny Thomas and **K. S. Devaky** *Polymer*, 111, 285-296(2017). ISSN: 0032-3861 IP: 3.586.
9. Anti-Inflammatory activity of novel series of isoniazid derivatives B. Thomas, J. Harindran, **K. S. Devaky** *Pharma Innovation Journal* 5(10), 01-11, (2016). ISSN: 2277-7695 IP :0.565
10. Recent advances and perspectives in the manganese-catalyzed epoxidation reactions K. K. Krishnan, A. M. Thomas, K. S. Sindhu, G. Anilkumar *Tetrahedron*, **2016**, 72, 1 IP2.7

11. Multiwalled carbon nanotubes with surface grafted transition state analogue imprints as chymotrypsin mimics for the hydrolysis of amino acid esters: Synthesis and kinetic studies; Christy Philip and **K.S. Devaky**, *Molecular Catalysis* 436 (2017) 276–284 . ISSN: 2468-8231. IF- 3.958.
12. Effect of reaction conditions in the reduction of carbonyl group using polymer anchored Ethylenediamine–Borane reducing agent: K. Rajasree, E. P Aparna and K. S. Devaky, *J. Chem. Pharm. Res.* 9(1), 54-60 (2017). ISSN: 0975-7384. IF- 0.543.
13. Phosphonate TSA-built macromatric polymer catalysts as chymotrypsin mimics for the amidolysis of amino acid *p*-nitroanilides:-Effect of the nature and extent of crosslinker on amidase activities: Divya Mathew, Benny Thomas and **K. S. Devaky**, *Polymer*, 111, 285-296(2017). ISSN: 0032-3861. IF- 3.586.
14. Anti-Inflammatory activity of novel series of isoniazid derivatives, B. Thomas, J. Harindran, **K. S. Devaky**, *Pharma Innovation Journal* 5(10), 01-11, (2016). ISSN: 2277-7695. IF- 0.565.
15. Amidase activity of phosphonate TSA-built polymer catalysts derived from organic monomers in the amidolysis of amino acid *p*-nitroanilides, Divya Mathew, Benny Thomas and **K. S. Devaky**, *Appl. Catal. A: General* 528, 93-103 (2016). ISSN: 0926-860X, IF- 4.012
16. Polymer-supported benzyltributylammonium borohydrides: Effect of nature of crosslinking and spacer group in reduction reactions, **K.S. Devak** and P.N. Leelamma, *J. Chem. Pharm. Res.* 8(4), 704-713(2016). ISSN: 0975-7384. IF- 0.543.
17. Amidase activity of phosphonate analogue imprinted chymotrypsin mimics in shape-selective, substrate - specific and enantioselective amidolysis of L-phenylalanine *p*-nitroanilides, Divya Mathew, Benny Thomas and **K. S. Devaky**, *J. Mol. Catal. A: Chemical* 415 (2016) 65–73. ISSN: 1381-1169, IF- 3.615.
18. Polymer supported benzyl quaternary ammonium dichromate reagent as a versatile oxidizing agent for the oxidation of diphenylcarbinol: Benny Thomas, Divya Mathew and **K. S. Devaky**, *SB Academic Review*, 19 (2016) 31-40.
19. **Boron doped graphene wrapped silver nanowires as an efficient electrocatalyst for molecular oxygen reduction** Nair, A. K., Kalarikkal, N., Thomas, S., Kala, M. S., Sahajwalla, V., Joshi, R. K., & Alwarappan, S. (2016).. *Scientific reports*, 6, 37731.

20. **Tunable morphology and hydrophilicity to epoxy resin from copper oxide nanoparticles.** *Composites Science and Technology*. Sunny, A. T., Mozetic, M., Primc, G., Mathew, S., & Thomas, S. (2017)
21. **Elastomer/thermoplastic modified epoxy nanocomposites: The hybrid effect of ‘micro’and ‘nano’scale.** Puglia, D., Al-Maadeed, M. A. S., Kenny, J. M., & Thomas, S. (2017). *Materials Science and Engineering: R: Reports*, 116, 1-29.
22. **Morphology, transport characteristics and viscoelastic polymer chain confinement in nanocomposites based on thermoplastic potato starch and cellulose nanofibers from pineapple leaf.** Balakrishnan, P., Sreekala, M. S., Kunaver, M., Huskić, M., & Thomas, S. (2017). *Carbohydrate Polymers*.
23. **To What Extent Can Hyperelastic Models Make Sense the Effect of Clay Surface Treatment on the Mechanical Properties of Elastomeric Nanocomposites?** Paran, S. M. R., Saeb, M. R., Formela, K., Goodarzi, V., Vijayan, P., Puglia, D., ... & Thomas, S. (2017).. *Macromolecular Materials and Engineering*
24. **Natural Rubber Based Research and Developments in Indian Rubber Industry.** Thomas, S. (2017). *NIPPON GOMU KYOKAISHI*, 90(3), 72-76.
25. **Development of nanoscale morphology and role of viscoelastic phase separation on the properties of epoxy/recycled polyurethane blends** Reghunadhan, A., Datta, J., Kalarikkal, N., & Thomas, S. (2017).. *Polymer*.(just accepted)
26. **Effect of organoclay on the solvent diffusion behavior and mechanical properties of natural rubber nanocomposites.** Meera, A. P., Thomas, S., Zachariah, A. K., & Yang, W. (2017). *Polymer Composites*.
27. **Mechanism of phase separation in a weakly interacting system with strong dynamic asymmetry,** Chandran, C. S., Antolasic, F., Shanks, R. A., & Thomas, S. (2017).. *Journal of Applied Polymer Science*.
28. **A comprehensive study of surface modified graphene based polymer nanocomposites for multifunctional electronic applications.** Abraham, J., Arif, M., & Thomas, S. (2016, October). In *Young Researchers in Vacuum Micro/Nano Electronics (VMNE-YR)* (pp. 1-13). IEEE.
29. **Rapid methylene blue adsorption using modified lignocellulosic materials.** Manna, S., Roy, D., Saha, P., Gopakumar, D., & Thomas, S. (2017). *Process Safety and Environmental Protection*, 107, 346-356.

30. **Polymer Sutures For Simultaneous Wound Healing And Drug Delivery-A Review.** Joseph, B., George, A., Gopi, S., Kalarikkal, N., & Thomas, S. (2017). *International Journal of Pharmaceutics*.
31. **Rigid Amorphous Phase: Mechanical and Transport Properties of Nitrile Rubber/Clay Nanocomposites** Thomasa, S., George, S. C., & Thomas, S. (2017).. *Progress in Rubber, Plastics and Recycling Technology*, 33(2), 103.
32. **Evaluation of Versatile CdS Nanomaterials Based Liquid Crystals Switchable Device.** Pal, K., Thomas, S., & Mohan, M. L. (2017). *Journal of Nanoscience and Nanotechnology*, 17(4), 2401-2412.
33. **UV protective poly (lactic acid)/rosin films for sustainable packaging.** Narayanan, M., Loganathan, S., Valapa, R. B., Thomas, S., & Varghese, T. O. (2017). *International Journal of Biological Macromolecules*, 99, 37-45.
34. **Preparation of a novel bioavailable curcuminoid formulation (Cureit™) using Polar-Nonpolar-Sandwich (PNS) technology and its characterization and applications** Amalraj, A., Jude, S., Varma, K., Jacob, J., Gopi, S., Oluwafemi, O. S., & Thomas, S. (2017).. *Materials Science and Engineering: C*, 75, 359-367.
35. **Transport behaviour of aromatic solvents through styrene butadiene rubber/poly [methyl methacrylate] (SBR/PMMMA) interpenetrating polymer network (IPN) membranes,** Jose J. George V., T., Pramoda K.P., Thomas S. Article reference: JPOL19559
36. **Curing enhancement and network effects in multi-walled carbon nanotube-filled vulcanized natural rubber: evidence for solvent sensing.** Ponnamma, D., Varughese, K. T., Al-Maadeed, M. A. A., & Thomas, S. (2017). *Polymer International*.
37. **Mechanical Properties of Short Sisal Fibre Reinforced Phenol Formaldehyde Eco-Friendly Composites.** Maya, M. G., George, S. C., Jose, T., Sreekala, M. S., & Thomas, S. (2017). *Polymers from Renewable Resources*, 8(1), 27.
38. **Electrospun poly(vinylidene fluoride-trifluoroethylene)/zinc oxide nanocomposite tissue engineering scaffolds with enhanced cell adhesion and blood vessel formation** , Augustine R., Dan P., Sosnik A., Kalarikkal N., Tran N., Vincent B., Thomas S., Menu P., and Rouxel D., (2017). *Nano Research* , 10.1007/s12274-017-1549-8 (just accepted)
39. **Probing the Density Variation of Confined Polymer Thin Films via Simple Model-Independent Nanoparticle Adsorption.** Unni, A. B., Vignaud, G., Chapel, J. P.,

Giermanska, J., Bal, J. K., Delorme, N., ... & Gibaud, A. (2017). *Macromolecules*. (just accepted)

40. **Meldrums Acid Modified Cellulose Nanofiber-Based Polyvinylidene Fluoride Microfiltration Membrane for Dye Water Treatment and Nanoparticle Removal**, Gopakumar D. A., Pasquini, D., Henrique, M. A., Luis, de Moraes., C. Grohens Y. and Thomas, S.,(2017) *ACS sustainable chemistry and Engineering*, DOI: 10.1021/acssuschemeng.6b02952
41. **UV Protective Poly (lactic acid)/Rosin Films for Sustainable Packaging**. Narayanan, M., Loganathan, S., Valapa, R. B., Thomas, S., & Varghese, T. O. (2017). *International Journal of Biological Macromolecules*.
42. **Fabrication of graphene oxide and hyperbranched polyurethane composite via in situ polymerization with improved mechanical and dielectric properties** Yadav, S. K., Suri, A., Ansari, M. O., & Thomas, S. (2017)..*Polymer Composites*.
43. **Influence of n-type nickel ferrite in enhancing the AC conductivity of optimized polyaniline-nickel ferrite nanocomposite** Megha, R., Ravikiran, Y. T., Kumari, S. V., & Thomas, S. (2017). *Applied Physics A*, 123(4), 245.
44. **A high-performance BaTiO₃-grafted-GO-laden poly (ethylene oxide)-based membrane as an electrolyte for all-solid lithium-batteries**. Angulakshmi, N., Kar, G. P., Bose, S., Gowd, E. B., Thomas, S., & Stephan, A. M. (2017). *Materials Chemistry Frontiers*.
45. **Chitin nanowhisker (ChNW)-functionalized electrospun PVDF membrane for enhanced removal of Indigo carmine**. Gopi, S., Balakrishnan, P., Pius, A., & Thomas, S. (2017) *Carbohydrate Polymers*, 165, 115-122.
46. **Curing Enhancement and Network Effects in Multi Walled Carbon Nanotube filled Vulcanized Natural Rubber □ Evidence for Solvent Sensing** Ponnamma, D., Varughese, K. T., Al□Maadeed, M. A. A., & Thomas, S. (2017).. *Polymer International*.
47. **Mechanical Properties of Short Sisal Fibre Reinforced Phenol Formaldehyde Eco-Friendly Composites**. Maya, M. G., George, S. C., Jose, T., Sreekala, M. S., & Thomas, S. (2017). *Polymers from Renewable Resources*, 8(1), 27.

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49. **Structural and Surface Compatibility Study of Modified Electrospun Poly(ϵ -caprolactone) (PCL) Composites for Skin Tissue Engineering,** Ghosal, K., Manakhov, A., Zajíčková, L., & Thomas, S. (2017).. *AAPS PharmSciTech*, 18(1), 156-165.
50. **Realization of Enhanced Magnetolectric Coupling and Raman Spectroscopic Signatures in 0-0 Type Hybrid Multiferroic Core-Shell Geometric Nanostructures.** Abraham, A. R., Raneesh, B., Woldu, T., Aškrabić, S., Lazovic, S., Dohčević-Mitrović, Z. D., ... & Kalarikkal, N. (2017). *The Journal of Physical Chemistry C*.
51. **Electrochemical studies on composite gel polymer electrolytes for lithium sulfur batteries** Natarajan, A., Stephan, A. M., Chan, C. H., Kalarikkal, N., & Thomas, S. (2017). *Journal of Applied Polymer Science*, 134(11).
52. **Enhanced photocatalytic performance of ZnO nanostructures produced via a quick microwave assisted route for the degradation of rhodamine in aqueous solution.** Thankachan, R. M., Joy, N., Abraham, J., Kalarikkal, N., Thomas, S., & Oluwafemi, O. S. (2017). *Materials Research Bulletin*, 85, 131-139.
53. **Presence of Vacuoles in Natural Rubber/Cloisite 15A Nanocomposites.**Didović, M. P., Klepac, D., Meera, A. P., Thomas, S., & Valić, S. (2017). *Journal of applied polymer science*.
54. **Smart in-plane switching of nanowires embedded liquid crystal matrix,**K. Pala, H.J. Maria, S. Thomas, M.L.N.M. Mohan, (2017). *Organic Electronics*, 42, 256–268
55. **Revalorization of sunflower stalks as novel sources of cellulose nanofibrils and nanocrystals and their effect on wheat gluten bionanocomposite properties** Fortunati, E., F. Luzi, A. Jiménez, D. A. Gopakumar, D. Puglia, S. Thomas, J. M. Kenny, A. Chiralt, and L. Torre (2016). *Carbohydrate polymers* 149 (2016): 357-368.
56. **Fabrication and characterization of biosilver nanoparticles loaded calcium pectinate nano-micro dual-porous antibacterial wound dressings** Augustine, R., Augustine, A., Kalarikkal, N., & Thomas, S. (2016).. *Progress in Biomaterials*, 5(3-4), 223-235.

57. **Environmental Fate of Zinc Oxide Nanoparticles: Risks and Benefits.** Beegam, Asfina, Parvathy Prasad, Jiya Jose, Miguel Oliveira, Fernando G. Costa, Amadeu MVM Soares, Paula P. Gonçalves et al. (2016): "*TOXICOLOGY-NEW ASPECTS TO THIS SCIENTIFIC CONUNDRUM* 81.
58. **Multiwalled carbon nanotubes@ octavinyl polyhedral oligomeric silsesquioxanes nanocomposite preparation via cross-linking reaction in acidic media.** Somasekharan, L., Thomas, S., Comoy, C., Sivasankarapillai, A., Kalarikkal, N., & Lamouroux, E. (2016). *Journal of Nanoparticle Research*, 18(11), 337.
59. **Electrochemical studies on composite gel polymer electrolytes for lithium sulfur battery** Natarajan, A., Stephan, A. M., Chan, C. H., Kalarikkal, N., & Thomas, S. (2016). *Journal of Applied Polymer Science*.
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92. **Mechanically strong, flexible and thermally stable graphene oxide/nanocellulosic films with enhanced dielectric properties** Pottathara, Y. B., Bobnar, V., Gorgieva, S., Grohens, Y., Thomas, S., & Finšgar, M. (2016).. *RSC Advances*. (just-accepted).
93. **Gentamicin loaded electrospun poly (ϵ -caprolactone)/TiO₂ nanocomposite membranes with antibacterial property against Methicillin resistant**

- Staphylococcus aureus (MRSA).** Augustine, R., George, S. C., Kalarikkal, N., & Thomas, S. (2016). *Polymer-Plastics Technology and Engineering*, (just-accepted).
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SCHOOL OF COMPUTER SCIENCES

Plan of action by IQAC/Outcome)

The major plan of action chalked out by the School for the academic year 2016-17 was setting up of a private cloud for the School and to migrate the digital repository of Workshops, seminars, PhD open defences and other e-learning contents to this cloud. It was also planned to enhance activities of the placement cell and to conduct skill development programmes in a regular manner and to give short add on courses on different softwares and scientific and computational tools and to continue the practice of offering remedial coaching/bridge courses to MSc/MTech students in specialized areas/computing tools. It was also planned to conduct more Capacity Building and Knowledge Upgradation programmes for faculty members and M Sc/M Tech/M Phil and Research students of the School.

Achievements (2016-17)

- The School could set up a private cloud and also migrated the digital repository of Workshops, seminars, PhD open defences and other e-learning contents to this cloud. Infrastructure enhancement and setting up the specialized research lab is in progress utilizing the plan fund allocated (Rs. 40 lakhs) for the year. The School could organize two National level workshops and one Seminar for Knowledge Upgradation of faculty members and M Sc/M Tech/M Phil and Research students of the School.
- As part of the Spoken Tutorial project(an initiative of NMEICT, MHRD, Govt. of India) add on course on ‘Scilab’ and ‘LaTex’ were organized for the students of the school.
- The School started collaborating as a nodal department with the Business Incubation and Innovation Centre (BIIC), Mahatma Gandhi University, established in 2016 with the seed capital donated by the Government of Kerala, aspiring to support innovations/incubations/entrepreneurship by extending academic and financial support to students through R&D support, start-up grants, patent facilitation and entrepreneurship support. In “**Business Innovation and Incubation – Student Start-up Exhibition**” conducted by the Centre during 15th and 16th December 2016, nine student startup project proposals were exhibited by the MSc/MTech students of the School.

- A special **meeting of the Alumni of the School was convened on 3.12.2016**. During the occasion, the founder director Dr.K N Ramachandran Nair and the three batches(1998-2000) of the alumni were honoured by the School. More than 50 alumni members were present.
- The 18th edition of the annual technical publication of the School “**IT Glimpse**” was also released, both the printed and online versions, during the inaugural function of Interface 2016 on 2.12.2016. All other actions planned for the year 2016-17 has been achieved to a remarkable extent.

(Analysis of Feedback from stakeholders)

The School regularly collects feedback during Alumni meets and PTA meetings. Major remarks pointed out the fact that curriculum provides a broad coverage of the subject area providing in depth knowledge in the subject. Feedbacks from the various stakeholders are used in the regular updation of syllabi and up to date choice of electives, meeting the demands of the industry. The School imparts special mode of training resulting in the overall development of the students. Extra curricular activities help the students in the soft skill enhancement.

Criterion - II

Annexure 2.5(Faculty Participation in Conference and Symposia)

Name of the faculty	Seminar /conference title	National/ International/ regional	Place
Dr. R Vijayakumar	Invited talk on “ Man and Machine - Current Scenario”Seminar taken in connection with TECHUP at KidangoorEngg college :: 26-07-2016 .	Regional	Kidangoor Engineering College
	Valedictory address : ICT in Teacher Education FDP: on 29-07-2016.	Regional	Titus College of Teacher education
	Valedictory address Carbon Credit FDP Programme – 31-08-2016	Regional	Barat Matha College, Thrikkakkara--
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer

			Sciences, in connection with International Women's Day celebrations – 9 th March, 2017.
Dr. Bindu V R	International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’	International	Organized by Mahatma Gandhi University during 4-6 February 2017
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Workshop on Approval Process 2017-18	National	Organized by All India Council for Technical Education (AICTE) held at CUSAT on 5.2.2017
	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University) on August 19, 2016.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016

	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with School of Computer Sciences on 1 st March 2017
	Participated as Resource Person in Inter Collegiate Seminar on Rights of Women	Regional	Organized by National Service Scheme, Mahatma Gandhi University at School of Behavioural Sciences on 7 th March 2017.
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.
Ms. Pushpalatha K P	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma

			Gandhi University) on August 19, 2016.
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with School of Computer Sciences on 1 st March 2017
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.
Dr. Anuj Mohamed	International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’	International	Organized by Mahatma Gandhi University during 4-6 February 2017
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation

			Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University) on August 19, 2016.
	Session Chair, International Conference on Signal and speech Processing (ICSSP 16)	International	Organized by the Department of Electronics and Communication Engineering, TKM College of Engineering, Kollam, 09.09.2016.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with School of Computer

			Sciences on 1 st March 2017
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.

Publications of the Faculty Members

No	Title	Author/s	Publication	Impact factor if any
1	A survey on Multi-Target Detection and Tracking in Wireless Sensor Networks, Innovative Thoughts	Josna Jose & Vijayakumar R.,	International Research Journal, (2016) 2(6), ISSN: 2321-5453.	
2	Parallel Neural Fuzzy-Based Joint Classifier Model for Grading Autistic Disorder. Advances in Intelligent Systems and Computing - Volume 356	AnjuPratap, C.S. Kanimozhiselvi, R. Vijayakumar ,K.V. Pramod	Soft Computing Applications Proceedings of the 6th International Workshop Soft Computing Applications (SOFA 2014), Volume 1 ISSN 2194-5357 ISSN 2194-5365 (electronic) Advances in Intelligent Systems and Computing ISBN 978-3-319-18295-7 ISBN 978-3-319-18296-4 (eBook) DOI 10.1007/978-3-319-18296-4; Library of Congress Control Number: 2015948723; Springer Cham Heidelberg New York Dordrecht London © Springer International Publishing Switzerland 2016	
3	Cloud Interrelated Service Oriented Audio Accepted by – Connections.	Rethish Kumar, Vijayakumar R.	International Journal of Computer Science and Information Technology Research, (2016),4(3), 119-126, ISSN 2348-1196.	0.516

4	Implementation of Server side service layer in internet of things,	JaisonHezakiel ,Vijayakumar.R	International Journal of Engineering Research –Online , ; July –August 2016 :Vol: 4, Issue :4 Pp119-126, ISSN 2321-7758(online)	0.475
5	Ensuring QoS by Accelerating the resource Provisioning tin the Virtulized Cloud Computing	ClerinTom ,Vijayakumar. R	International Journal of Engineering Research –Online , ; July –August 2016 :Vol: 4, Issue :4 ,Pp119-126, ISSN 2321-7758(online) .	0.475
6	” An Effective Clustering method with search Structure for Large Multidimensional Dynamic indexes”	R.Vijayakumar ,Sunil Sunny, Rajalakshmi	Journal of Advances in Natural and Applied Sciences”, 10(8) , 17-85, ISSN: 1995-0772.- Anna University Annexure 2(2016)	0.34
7	Application of Multilayer Principal Component analysis	Juby Mathew, Vijayakumar,R,	International conference on Engg and Tech (ICET -16), Dec 2016 , Karpakam College of Engg , Coimbatore , ID No: 468, ISBN 978-1-5090-32-13-6	
8	Distributed weighted Fuzzy C-Means Clustering Method with Encoding Based Search Structure for Large Multi-dimensional Dynamic Indexes”	R.Vijayakumar ,Sunil Sunny, Rajalakshmi	Middle east Journal of Scientific Research (MEJR0; ISSN: 1990-9233, (2016) , Anna Uty Annexure -2.	
9	Modelling Deformable Surfaces: A Promising Technique for Shape Modelling and Visualization in Medical Imaging	Bindu V.R.	International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’ , organized by Mahatma Gandhi University during 4-6 February 2017	
10	Impact of Innovative Expert Systems in a Nation’s Growth – A Global Perspective.	Preetha S, Dr. Bindu V R	“	
11	Automatic Speech Recognition: Technology Development.	Dr. Anuj Mohamed	“	
12	Creative Destruction through Internet of Things and its Impact on Indian Start-ups	Sneha Jacob, Dr. Anuj Mohamed	“	

Annexure 2.13 (Various Faculty Development Programmes Attended/Organized by faculty of the School)

Name of the faculty	Seminar /conference title	National/ International/ regional	Place
Dr. R Vijayakumar	Invited talk on “ Man and Machine - Current Scenario”Seminar taken in connection with TECHUP at KidangoorEngg college :: 26-07-2016 .	Regional	Kidangoor Engineering College
	Valedictory address : ICT in Teacher Education FDP: on 29-07-2016.	Regional	Titus College of Teacher education
	Valedictory address Carbon Credit FDP Programme – 31-08-2016	Regional	Barat Matha College, Thrikkakkara--
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
Dr. Bindu V R	International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’	International	Organized by Mahatma Gandhi University during 4-6 February 2017
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Workshop on Approval Process 2017-18	National	Organized by All India Council for Technical Education

			(AICTE) held at CUSAT on 5.2.2017
	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University) on August 19, 2016.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with School of Computer Sciences on 1 st March 2017
	Participated as Resource Person in Inter Collegiate Seminar on Rights of Women	Regional	Organized by National Service Scheme, Mahatma Gandhi University at School of Behavioural Sciences on 7 th March 2017.
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in

			connection with International Women's Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.
Ms. Pushpalatha K P	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University) on August 19, 2016.
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with

			School of Computer Sciences on 1 st March 2017
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.
Dr. Anuj Mohamed	International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’	International	Organized by Mahatma Gandhi University during 4-6 February 2017
	Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA,	International	Organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.
	Three day National level workshop on “Data Analytics and Machine Learning Using R”	National	Organized by School of Computer Sciences, June 15-17, 2016
	One day outreach programme on “Facilitating Innovation and Patent Filing”	Regional	Organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS) and MHRD Chair on IPR, CUSAT (Hosted by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University) on August 19, 2016.
	Session Chair, International	International	Organized by the

	Conference on Signal and speech Processing (ICSSP 16)		Department of Electronics and Communication Engineering, TKM College of Engineering, Kollam, 09.09.2016.
	Seminar on “Remoteness Function on Median Graphs”.	Regional	Organized by School of Computer Sciences, 2 nd Dec 2016
	Special Lecture on “Innovation and Technology” by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany.	International	Organized by Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University in association with School of Computer Sciences on 1 st March 2017
	Special Talk “Women Empowerment and Legal Protection”	Regional	Organized by School of Computer Sciences, in connection with International Women’s Day celebrations – 9 th March, 2017.
	Five day National level workshop on “Data Analytics, Mining and Machine Learning Using R”	National	Organized by School of Computer Sciences, March 27-31, 2017.

Criterion - III

Annexure 3.11(No. Of Conferences Organized by the Institution)

1. Organized a three day **National level workshop on “Data Analytics and Machine Learning Using R” June 15-18, 2016** as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School, in collaboration with **Scientific Computing Solutions, Chennai.**



2.





2. Five day National level workshop on “Data Analytics, Mining and Machine Learning using R” 27/03/2017 to 31/03/2017 for Research Scholars (2016 Admission) and M Phil students of the School, by Dr. Mahesh Anand, Founder and CTO, Scientific Computing Solutions India Chennai.

International

1. Special Lecture by Prof. Heinz D Kurz, Professor of Emeritus, Graz Schumpeter Centre(GSC), University of Graz, Germany on “Innovation and Technology” Organized in association with Business Innovation and Incubation Centre (BIIC) and University Centre for International Co-operation (UCIC) of the University.



2. Seminar on “Inculcating Entrepreneurship ” by Dr. Rajesh Nair, Asia School of Business, Visiting Faculty, MIT, USA, organized in association with Business Innovation and Incubation Centre (BIIC), Mahatma Gandhi University, on 30.01.2017.

Regional

1. Seminar on “Remoteness Function on Median Graphs”.
2. A Debate on “Are Women Secure in Modern Society?” in connection with International Women’s Day Celebrations.

University level :

1. **Faculty Development Programme - Two Weeks Capacity Building Workshop on “E-Learning and E-Content Development” 16th – 31st January 2017,** was organized in association with College Development Council, Mahatma Gandhi University and University Centre for International Co-operation (UCIC), at School of Computer Sciences.

Annexure 3.12 (Faculty served as experts/chairpersons/resource persons)

Prof. (Dr.) R. Vijayakumar

1. Centre for Bio Informatics , 04-06-2011 onwards Adjunct Professor, University of Kerala ,Kariyavattom , Trivandrum
 2. Academic Council , CUSAT 11-03-2015 onwards
 3. Ex-OFFICIO NOMINEE of the Vice-Chancellor , M G UTY
 4. Member BoSCS(PG) 09-12-2015 Onwards KannurUniversity
 5. Chairman BoSCS(PG) 09-12-2015 Onwards M G University
 6. Member IQAC, Mahatma Gandhi University
 7. Member of BoS CS (PG), CMS (Autonomous)
-

Activities outside UTY

- JRF Evaluation: External Expert member, Dept of Computer Science , CUSAT
- Expert member PhD Evaluation , CS, Anna University : 2016 -17 , Madurai Kamaraj UTY, Bharathiyyar UTY
- Research Guide : Engg&Technology , Anna University : 2009 onwards

Programmes conducted :- conducted a Faculty Development programme during January 16 th to 31st 2017 ; on “ E-Learning and E- content Development “ for the Teachers of affiliated Colleges.

Book Published :-

- A book was published with the papers presented by faculty ; in the Faculty Development programme held during January 16 th to 31 st 2017 ; on “ E-Learning and E- content Development “ for the Teachers of affiliated Colleges.

- Book Named:- “ E-Learning instructional design for short Learning Objects “. ISBN: 978-93-80418-293
- Published: - Printing and Publishing Division, Mahatma Gandhi University, Kottayam.

Dr. Bindu V.R.

1. Dean, Faculty of Technology and Applied Science, MGU.
2. Member, Academic Council, MGU.
3. Member University Research Committee, MGU.
4. Chairperson, Board of Studies, School of Computer Sciences.
5. Member Board of Studies Computer Science (PG), University of Kerala.
6. Member of Expert Committee to strengthen the System Administration Wing of the University
7. Chief Co-ordinator of the Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt of India), in the University. Initiated activities of the faculty co-ordinators of affiliated institutions for the new academic year.
8. Presiding Officer of the Permanent Cell to Combat Sexual Harassment in the University.
9. Member of University level Implementation and Monitoring Committee (E-Governance)
10. Member of the Technical committee to assess the Software/Hardware requirements for the e-learning project of the University.
11. Member of e-learning/ICT Committee for e-learning project approval, e-content approval and for taking other decisions related to e-learning and net working.
12. **Technical Advisor, Faculty Development Programme - Two Weeks Capacity Building Workshop on “E-Learning and E-Content Development” 16th – 31st January 2017**, organized in association with College Development Council, Mahatma Gandhi University and University Centre for International Co-operation (UCIC), at School of Computer Sciences.
13. Member, Steering Committee, **International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction?’** , organized by Mahatma Gandhi University during 4-6 February 2017
14. Resource Person in **Inter Collegiate Seminar on Rights of Women** organized by **National Service Scheme, Mahatma Gandhi University** at School of Behavioural Sciences on 7th March 2017.

15. Attended the Joint meeting of Faculties in connection with the Syllabus Revision of UG programmes 2017-18 of the University held on 28.03.2017.
16. Professional member of **ACM (Association of Computing Machinery)**.
17. Life Member – **IAENG (International Association of Engineers)**
18. Conducted MSc and M Tech, I and III semester and M Phil I Semester Examinations of the School.

Ms. Pushpaltha K.P.

- Member Board of Studies Computer Science (PG), School Of Computer Sciences, M.G. University, Kottayam.
- As a member of Faculty Council of the School, actively taking part in all the decision making activities of the School in all the activities referred in the case of the School.
- According to changing technologies, the contents of the syllabi of the courses are updated frequently
- Invigilator of examinations conducted by Mahatma Gandhi University
- Member of e-learning/ICT Committee for e-learning project approval, e-content approval and for taking other decisions related to e-learning and networking.
- Member of the Permanent Cell to Combat Sexual Harassment in the University.
- Attended the meeting of joint faculties for the revision of the curriculum of UG Programs of the University on 28/03/2017 organised by the University, at the university Campus.
- Faculty Advisor , M.Sc. Computer Science 2015-2017 Batch.

Dr. Anuj Mohamed

1. Member - Board of Studies Computer Science (PG) of School Of computer Sciences.
2. Member – IQAC of the University.
3. Faculty Co-ordinator, IQAC of the School.
4. One of the Co-ordinators of the Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India), in the University.
5. Actively taking part in all the decision making activities of the School as a faculty council member of the School.
6. Actively involved in the preparation of Annual Quality Assurance Reports of the School.

7. Member, Organizing Committee, “Interface 2016” annual technical meet of Computer Science students organized by the School in association with Computer Science Students’ Association of the School.
8. Member, Organizing Committee, Annual Alumni Meet of the School held on 6th December 2016.
9. Professional Member of ACM (Association of Computing Machinery).
10. Life Member – IAENG (International Association of Engineers)

Annexure 3.13 (Collaborations)

Due to the rapid developments in the subject area the School needs to maintain constant collaboration with the industry / R&D organizations. Normally M Sc/ M Tech students are allowed to take up the main project in collaboration with leading R&D organizations/industries. This enables the students to develop a solution to a fairly large problem in addition to the exposure to the professional and real time environments of the organizations. MNC’s / organizations with which we are constantly interacting include ISRO, C-DAC, C-DIT, NPOL, BARC, Siemens, Keltron, Microsoft, Oracle, Lucent Technologies, Infosys, Wipro, CMC, IMR, BaaN, HP, BFL Software, Pentasoft, US Software, HBS, Suntec, Polus Software etc. The school also maintains close academic tie-ups with Department of Computational Biology and Bioinformatics, Department of Computer Science, University of Kerala, ISRO Thiruvananthapuram, Cochin University of Science and Technology, and Kannur University.

Annexure 3.14 (Linkages Created During This Year)

Linkages have been established with TKM College Of Engineering, Karicode, Kollam, Dept of Futures Studies, University of Kerala, Kariyavattom, Department of Computer Science University of Calicut, Dept. of Computer Science and Engineering, FISAT, Angamaly, Dept of Computational Biology and Bioinformatics, University of Kerala, CDAC, Kochi, for M Tech/ M Sc students’ major projects.

The School also maintained its linkages with Cusat, Calicut, Kerala and Kannur Universities.

Annexure 3.26 (Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility)

1. Interface 2016- an annual IT Meet (IT competitions) organized by the School provided a platform for students in Computer Science and Technology from various Universities and Colleges in South India to showcase their technical talents and also served as a forum as a forum for information interchange in the field.
2. Activities of the Placement Cell has been strengthened by means of a series of workshops and seminars for “Skill Enhancement” (*SPARK*) for students of the School. Four M Sc students (2014-16batch) got well placed through off campus recruitment
3. The School started collaborating as a nodal department with the Business Incubation and Innovation Centre (BIIC), Mahatma Gandhi University, established in 2016 with the seed capital donated by the Government of Kerala, aspiring to support innovations/incubations/entrepreneurship by extending academic and financial support to students through R&D support, start-up grants, patent facilitation and entrepreneurship support. In “**Business Innovation and Incubation – Student Start-up Exhibition**” conducted by the Centre during 15th and 16th December 2016, **nine student start up projects were proposed and were exhibited by the MSc/MTech students of the School.**

Criterion - V

Annexure 5.6 (Details of Student Counselling and Career Guidance).

- Faculty members provide regular counselling to students. Each batch is assigned a faculty advisor.
- Each faculty takes extra care in identifying the calibre of students and guides them to choose projects and career according to their aptitude and capability.

Annexure 5.7(Details of Campus Placement).

- Students resume are sent to various firms as part of project placement. Those get selected after screening tests and interview complete the projects and usually get absorbed by the firms. On completion of the programme, firms are communicated for conducting placement tests and interviews. In both these placement activities, the alumni of the School renders a great level of support to the placement cell of the School.

Annexure 5.9 (Details of Students Activities)

The School has been organizing an annual technical meet “Interface” since 1996 and publishing an annual technical publication “IT Glimpse” since 1999. The two days programme is completely organized by the students with ample support and guidance from alumni and faculty members. The event aims at bringing together computer science students from various universities and institutions and to provide a common platform to share their talents by means of a series of technically challenging competitions like Paper Presentations, Technical Quiz, Programming, N/W gaming, Troubleshooting and so on.

- This year’s Interface, the 21st annual technical meet of Computer Science students, was conducted on **December 2nd and 3rd 2016**. The meet was organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences, MG University under the guidance of the faculty members and with the support of the Alumni of the School. 67 Student delegates from 9 institutions participated. The technical events included Paper Presentation, Trouble shooting and Cyber Skills, Software Coding, Web Designing and Technical Quiz.
- The 18th edition of the annual technical publication of the School “**IT Glimpse**” was also released, both the printed and online versions, during the inaugural function of Interface 2016 on 2.12.2016.
- Seminar on “Remoteness Function on Median Graphs” was delivered by Dr. Ajitha R S, Post Doctoral Fellow at University of Kerala (also an alumnus of the School), on 2.12.2016.
- A special **meeting of the Alumni of the School was convened on 3.12.2016**. During the occasion, the founder director Dr.K N Ramachandran Nair and the three batches(1998-2000) of the alumni were honoured by the School. More than 50 alumni members were present.



Organizing an event like this enhances the soft skills of our students like organizing capacity, peer group management skills, communication skill etc. in addition to enriching their technical/academic knowledge.

All students of the school participated in the cultural meet organized in connection with Interface 2016

Annexure 5.10(Scholarships and Financial Support)

	Number of students	Amount In rupees
Financial support from institution		
Financial support from government	61	1,269,215
Financial support from other sources	1	3,00,800
Number of students who received International/ National recognitions		

Financial support from Government

- E-grants Scholarship– 47 MSc students / 10 MTech students / 3 M Phil Students / 1 Ph D
- Moulana Azad National Fellowship for Minority students – 1 SRF - 300800

Annexure 5.11(Student Organized/ Initiatives)

- **State Level – Interface 2016**

The School has been organizing an annual technical meet “Interface” since 1996 and publishing an annual technical publication “IT Glimpse” since 1999. The two days programme is completely organized by the students with ample support and guidance from alumni and faculty members. The event aims at bringing together computer science students from various universities and institutions and to provide a common platform to share their talents by means of a series of technically challenging competitions like Paper Presentations, Technical Quiz, Programming, N/W gaming, Troubleshooting and so on.

- This year’s Interface, the 21st annual technical meet of Computer Science students, was conducted on **December 2nd and 3rd 2016**.The meet was organized by the members of

CSSA(Computer Science Students' Association) of School of Computer Sciences, MG University under the guidance of the faculty members and with the support of the Alumni of the School. 67 Student delegates from 9 institutions participated. The technical events included Paper Presentation, Trouble shooting and Cyber Skills, Software Coding, Web Designing and Technical Quiz.

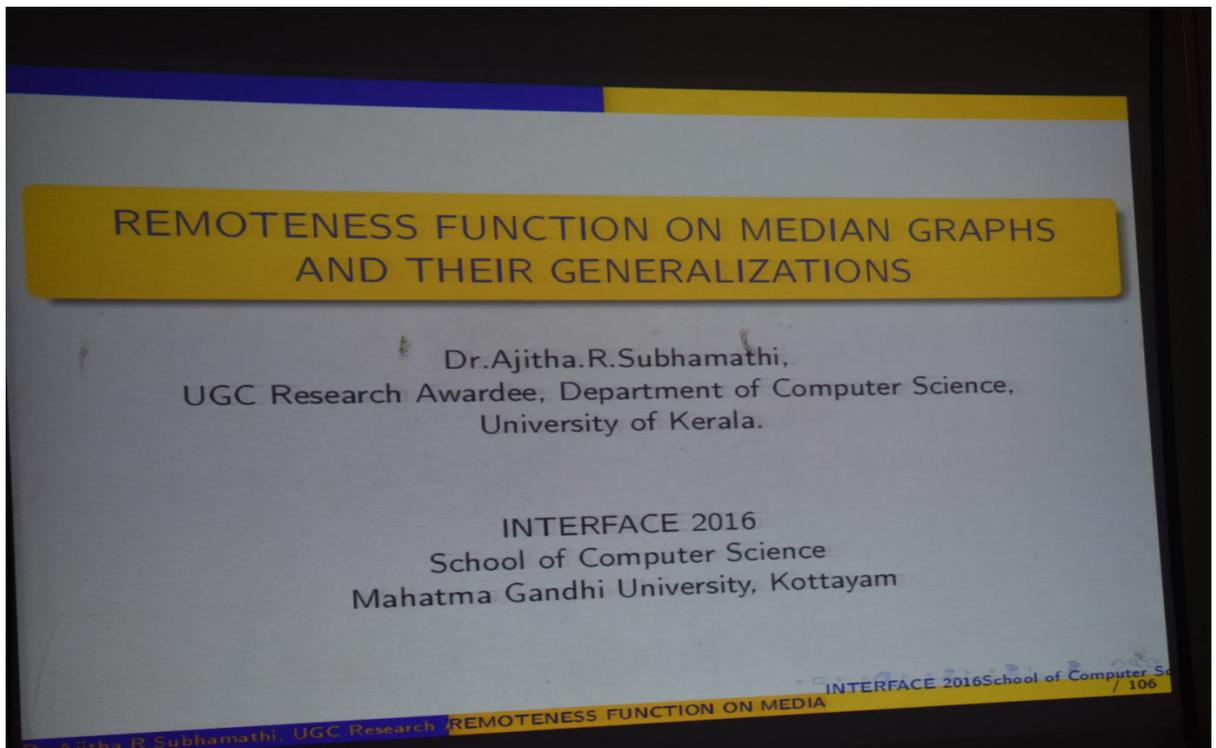




- The 18th edition of the annual technical publication of the School “**IT Glimpse**” was also released, both the printed and online versions, during the inaugural function of Interface 2016 on 2.12.2016.



- Seminar on “Remoteness Function on Median Graphs” was delivered by Dr. Ajitha R S, Post Doctoral Fellow at University of Kerala (also an alumnus of the School), on 2.12.2016.





- A special **meeting of the Alumni of the School** was convened on **3.12.2016**. During the occasion, the founder director Dr.K N Ramachandran Nair and the three batches(1998-2000) of the alumni were honoured by the School. More than 50 alumni members were present.
- Organizing an event like this enhances the soft skills of our students like organizing capacity, peer group management skills, communication skill

SCHOOL OF ENVIRONMENTAL SCIENCES

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	1			
PG	2			
UG				
PG Diploma				
Advanced Diploma				
Diploma				
Certificate	1			
Others	1 (MPhil)			
Total	5			

Interdisciplinary				
Innovative				

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Yes, Vembanad Environment Research Centre (VERC). The centre started with the help of State Plan fund of Rs. 2.6Cr.

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	8	6	4
Presented	32	2	7
Resource Persons	3	3	20

Faculty participation in conferences and symposia

Dr. E.V.Ramasamy, Associate Professor

- International Conference on Water: From Pollution to Purification (ICW 2016)**, Mahatma Gandhi University, Kottayam, Kerala, Dec. 12-15, 2016.
- International Conference on 'Environment and Health in Changing Climate (ICEHCC2016)'**, Bharathidasan University, Tiruchirappalli. September 14-16, 2016.
- LAKE 2016 : International Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats**, held at

Alva's Education Foundation (R), Sundari Ananda Alva Campus, Vidyagiri , Moodbidri ,D.K.District , Karnataka.

4. Seminar on 'Developing Integrated Solid Waste Management Plan' organised by Marthoma College, Tiruvalla, June 08, 2016.
5. One-day Seminar on 'Methods in Environmental Research' organised by PG Dept of Botany, Bishop Abraham Memorial College, Thuruthicad, Pathanamthitta, as Key speaker of the day, July 15, 2016.
6. 'Fifth Annual National Conference on Urbanization and Environment of Loyola Forum for Historical Research (LFHR), organised by Loyola Forum for Historical Research (LFHR), Loyola College, Chennai, as a Invited speaker and delivered an invited lecture on 'Waste Management : Lessons from History', July 21-22, 2016.
7. Seminar on 'Biological Applications on Environmental Engineering' organised by Cashew Export Promotion Council(CEPC) Laboratory & Technical Division, Cashew Bhavan, Kollam as a resource person and delivered an invited lecture on 'Environmental Biotechnology for Waste Management', August 22, 2016.
8. Delivered the 2nd Endowment Lecture (Dr Shaju Thomas and Dr. Sasikala K Joseph Endowment Lecture 2016) on 'Waste Management: Wealth from Waste Approach ', on November 03, 2016 at Department of Zoology, Nirmala College, Muvattupuzha.
9. 29th Kerala Science Congress, held during Jan 28-30, 2017, at Marthoma College, Thiruvalla, Kerala.
10. World Water Day special Lecture on 'Wetlands', on February 01, 2017 at Dept. of Biotechnology, Konni College, Pathanamthitta
11. *National Seminar on Environmental Degradation and Climate Change* organised by School of Environmental Studies , CUSAT, Kochi. February 15, 2017

Dr. C.T. Aravindakumar, Professor

1. International conference on Water – Pollution to Purification, December 12-15, School of Environmental Sciences, M.G.University, Kottayam

Dr. Mahesh Mohan, Assistant Professor

1. International conference on Water – Pollution to Purification, December 12- 15, School of Environmental Sciences, M.G.University, Kottayam

Dr. Sylas V.P., Assistant Professor

1. **Participated in the 29th Kerala Science Congress**, held during Jan 28-30,2017,at Marthoma College, Thiruvalla, Kerala.
2. **Participated and presented a paper** at ‘International Conference on Water (ICW-2016) held at School of Environmental Sciences, MG University, Kottayam during 12 -15, December 2016.
3. **World Wetlands Day** – Delivered an Invited talk on ‘Wetlands – Nature’s soldier to combat Climate change’ at NSS College, Vazhoor, Kottayam on 01 February 2017
4. **World Wetlands Day** – Delivered an Invited talk on ‘Wetlands for Disaster Risk reduction’ at Assumption College, Changanasserry, Kottayam on 06 February 2017.
5. **World Ozone Day** – Delivered anInvited Lecture on ‘*Ozone and Climate change*’ on 22 September, 2016 at M.S.M. College, Kayamkulam, Alappuzha, Kerala.

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
M.Sc. Environment Science & Management	10	Nil	70	20		90
M.Sc. Environment Science & Disaster Management	9	Nil	70	30		100
M.Phil in Environment Management	08	Nil	100			100

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

Advised on the implementation of VERC programme
 Advised on effective utilisation of DST PURSE fund on procurement of sophisticated instruments
 It acted as instrumental in designing the sophisticated instrumentation for analytical work
 Several new projects were framed based on the recommendation of the IQA

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	1	5	1	
Outlay in Rs. Lakhs		59		

Details regarding major projects (2016-17)

Dr. CT Aravindakumar

1. Nationwide Environmental Gamma Radiation Monitoring Using TLDs , BRNS
2. Investigation of the spatial distribution of uranium and associated water quality parameters in five central districts of Kerala, BRNS
3. Development of Self-contained, PV powered domestic toilet and waste water treatment system, CALTECH, USA

Dr. Mahesh Mohan

1. **KSCSTE- BTL Project** (as scientist mentor) Evolution of Karamana river basin and its implications on hydrogeology: A geomatics approach using morphometric analysis (ongoing)
2. **Arctic Expedition** : Long – Term Environmental Monitoring of Arctic Fjords, **till 2020**
3. **DoECC, Govt. Kerala** : Perchlorate contamination of drinking water resources in Kerala
4. National programme on **Survey and exploration of Hydrothermal sulphide vents/ deposits in parts of Central and South-West Indian ridges**, by ESSO-NCAOR, MoES

3.4 Details on research publications

	International	National	Others
Peer Review Journals	31		
Non-Peer Review Journals			
e-Journals			
Conference proceedings	34	7	2

Details on research publications (2016-17)

Dr. E.V. Ramasamy, Associate Professor

1. Sajithkumar, K. J. , Visakh, P. M. , **E. V. Ramasamy** (2016). Moringa oleifera (Drum Stick Vegetable Fibre) Based Nanocomposites with Natural Rubber: Preparation and Characterization, Waste and Biomass Valorization, (Springer) Vol 7 (1), Feb 2016, DOI 10.1007/s12649-016-9499-z
2. Sruthy S Nair, M S Shyleshchandran, Sunil Paul Mathew and **Ramasamy E V (2016)**. ‘Contamination from Organochlorine Pesticides (OCPs) in the agriculture soils of Kuttanad Agro-ecosystem in India and related potential health risk’,*Environmental Science and Pollution Research (Springer)* ; (doi:10.1007/s11356-016-7834-3), published on line October 20, 2016.
3. P. Padma , **E.V Ramasamy** , Muralivallabhan T. V and A.P Thomas (2016)
4. ‘Changing scenario of household consumption pattern in Kerala – An emerging consumer state in India ’, *Social Indicators Research- An International and Interdisciplinary Journal for Quality-of-Life Measurement (Springer)* ; DOI 10.1007/s11205-016-1518-8, published on line December 20, 2016.
5. **E.V.Ramasamy** (2016). Decontamination of wastewater with Phytoremediation. South Indian Journal of Biological Sciences 2016; 2(1); 103-109 ONLINE ISSN: 2454-4787.
6. Arunbabu V, Ignatius Antony , **Ramasamy EV**, (2016). Cadmium removal from aqueous solutions using Macaranga peltata: a potential plant for Phytoremediation. South Indian Journal of Biological Sciences 2016; 2(1); 84-87 , ONLINE ISSN: 2454-4787.
7. S. Sruthy and **E. V. Ramasamy (2017)**, ‘ Microplastic pollution in Vembanad Lake, Kerala, India: The first report of microplastics in lake and estuarine sediments in India’, *Environmental Pollution(Elsevier)* **222 (2017) 315-322**.

Dr. C.T. Aravindakumar, Professor

1. Manoj P. Rayaroth, Usha K. Aravind, Charuvila T. Aravindakumar, Degradation of pharmaceutically active compounds by ultrasound based advanced oxidation process: A review, *Env. Chem. Lett.*, 2016
2. M. P. Rayaroth, U. K. Aravind, C. T. Aravindakumar, Ultrasound based AOP for emerging pollutants: From degradation to mechanism, *Environ. Sci. Pollut. Res.* 2016 (in press) Manoj P. Rayaroth, Chung-Seop Lee, Usha K. Aravind, Charuvila T.

Aravindakumar, Yoon-Seok Chang, Oxidative degradation of benzoic acid using Fe⁰-andsulfidized Fe⁰-activated persulfate: A comparative study *Chem. Eng. J.* **315** (2017) **426–436**

3. Manoj P. Rayaroth, Usha K. Aravind, Charuvila T. Aravindakumar, Role of in-situ nitrite ion formation on the sonochemical transformation of para-aminosalicylic acid, *Ultrason. Sonochem.* **2017** (*in press*)
4. Nihal Oturan, Charuvila T. Aravindakumar, Hugo Olvera-Vargas, Mathew M. Sunil Paul, Mehmet A. Oturan, Electro-Fenton oxidation of para-aminosalicylic acid: degradation kinetics and mineralization pathway using Pt/carbon-felt and BDD/carbon-felt cells, *Environ Sci Pollut Res* (2017), DOI. 10.1007/s11356-017-9309-6
5. Sijumon Velachimangalam A., Aravind Usha K., and Aravindakumar Charuvila T, Degradation of Amaranth Dye Using Zero Valent Iron Nanoparticles: Optimal Conditions and Mechanism. *Environmental Engineering Science*. May 2017, 34(5): 376-383
6. Jissy Mathew, Akhil Gopalakrishnan, Charuvila T. Aravindakumar, and Usha K. Aravind, Transport properties and morphology of CHI/PSS multilayered microfiltration membranes for the low pressure filtration of amino acids, *J. Chem. Technol. Biotechnol.*, **2017**, 92, 834-844
7. Sunil Paul M. Menachery, Sreekanth R. Nair, Pramod Gopinathan, Usha K. Aravind, and C. T. Aravindakumar, Transformation Reactions of Radicals from the Oxidation of Diphenhydramine: Pulse Radiolysis and Mass Spectrometric Studies, *Chemistry Select*, 2016 (*in press*)
8. Subha Sasi, M. P. Rayaroth, D. Devadasan, Usha K. Aravind and C. T. Aravindakumar, Influence of inorganic ions and selected emerging contaminants on the degradation of Methylparaben: A sonochemical approach, *Journal of Hazardous Materials*, 2015, 300, 202-209
9. Jisha Chandran, U.K. Aravind, C.T. Aravindakumar, *Sonochemical transformation of thymidine: A mass spectrometric study*, *Ultrasonics Sonochemistry*, 2015, 27, 178-186
10. S. P. M. Menachery, Olivier Laprévotte, Thao P. Nguyen, Usha K. Aravind, G. Pramod and C.T. Aravindakumar, *Identification of Position Isomers by Energy-Resolved Mass Spectrometry*, *Journal of Mass Spectrometry*, 2015, 50, 944–950

Dr. Mahesh Mohan, Assistant Professor

1. **Mahesh Mohan**, Chandini P.K., K.P. Krishnan, Gopikrishna V.G., Sajin Kumar K. S. and Kannan V.M. (2017) Mercury fractionation in the sediments of Kongsfjorden, an Arctic Fjord, Svalbard, *International Journal of Marine Sciences*, Biopublishers, Canada, Vol.7, No.26, 260-271
2. Sijimol M. R., **Mahesh Mohan**, Gopikrishna V. G. and Dineep D. (2017). Perchlorate in drinking water around rocket manufacturing and testing facilities and firework

- manufacturing sites in Kerala, India. *Energy Ecology and Environment* ,DOI 10.1007/s40974-017-0055-x **Springer**
3. Krishna M.P and Mahesh Mohan. Litter decomposition under forest ecosystems - a review, *Energy Ecology and Environment* , *Energ. Ecol. Environ.* (2017) 2(4):236–249, DOI 10.1007/s40974-017-0064-9**Springer**
 4. Ramasamy EV, Jayasooryan KK, Shylesh Chandran MS, **Mahesh Mohan** . (2017) Total and Methyl Mercury in the Water, Sediment and Fishes of Vembanad, a Tropical Backwater System, India, *Environmental Monitoring and Assessment*. 189:130
 5. Thafna K.K., Navya Cherian, Binish M.B., Gopikrishna V.G., Mahesh Mohan. 2017. Distribution of nutrients in the soils of a unique tropical agroecosystem. Submitted to *Environmental Pollution and Protection Vol. 2, No. 2, 56-65*
 6. **Mahesh Mohan**, Gopikrishna V.G., Navya Cherian, Jyothy S., Toms Augustine, Sreedharan K. (2016). Monitoring of Toxic Pollutants in the Marine Environment- A Review. *International Journal of Marine Sciences*, (Biopublisher, Canada), 6(9): 1-20 (doi: 10.5376/ijms.2016.06.0009).
 7. Sijimol MR, **Mahesh Mohan**, Dineep D (2016) Perchlorate contamination in Bottled and Other Drinking Water Sources of Kerala, Southwest coast of India. *Energy Ecology and Environment*, *Energ. Ecol. Environ.* (2016) 1(3):148–156, **Springer**

Dr. Syllas V.P., Assistant Professor

1. Jerry Mechery, Biji B., Daniya M. Thomas and **Syllas V.P.** (2017). [Biohydrogen production by locally isolated facultative bacterial species using the biomass of *Eichhornia crassipes*: effect of acid and alkali treatment](#). *Energy, Ecology and Environment*: DOI 10.1007/s40974-017-0069-4 (Springer)
2. Anila B.N., Muraleedharan Nair M.K. and **Syllas V.P.** (2017). Synthesis Characterization and Antimicrobial Analyses of Iron (III) Complexes of 1-(imino-4-antipyrinyl)-8-aminonaphthalene. *Research Journal of Pharmaceutical, Biological and Chemical Sciences* 8(1):161-172.
3. Anila B.N., Muraleedharan Nair M.K., Jisha Sreedharan and **Syllas V.P.** (2017). Synthesis, Characterization, Molecular Modeling, Antimicrobial and DNA Binding Studies of Cobalt(II) Complexes of 2,3-(Diimino-4'-antipyrinyl)butane with Varying Counter Ions. *Asian Journal of Chemistry* 29(3) : 691-702.

4. Daniya M. Thomas, Mechery Jerry and **V. P. Sylas** (2016) Carbon dioxide capture strategies from flue gas using microalgae: A review. *Environ. Sci. pollut. Res.* 23 (17): 16926–16940. DOI 10.1007/s11356-016-7158-3. (Springer)
5. K. Raisa and **V. P. Sylas** (2016) Heavy metal tolerance pattern and antibiotic susceptibility of *Chromobacterium piscinae*, an opportunistic pathogen isolated from the Rhizosphere of water hyacinth. *Acade. J. Microbiol. Res.*, 4(5): 086-091. DOI: 10.15413/ajmr.2016.0111
6. M. T. Daniya, M. Jerry, **V. P. Sylas** (2016) Isolation of native flue gas tolerant microalga from a mixed culture grown under stress condition, *Intr. J. Environ. Scie.* 6(6): 970-978. DOI:10.6088/ijes.6091
7. BN Anila, PK Radhakrishnan, MK Muraleedharan Nair, Raisa Kabeer **and VP Sylas** (2016). Synthesis, characterization and antimicrobial analyses of nickel (II) complexes of 2,3-(Diimino-4-antipyrinyl) butane. *International Journal of Chemical Studies.* 4(4): 206-212.
8. BN Anila, PK Radhakrishnan, MK Muraleedharan Nair, Raisa Kabeer **and VP Sylas** (2016). Synthesis, Characterization, Thermal Decomposition And Antimicrobial Studies Of Iron (III) Complexes Of 2,3-(Diimino-4'-Antipyrinyl)Butane With Varying Counter Ions. *Journal of Chemical and Pharmaceutical Research*, 8(9):64-72.

Research papers presented in Conferences / Seminars

Dr. E.V. Ramasamy

1. Arunbabu V and E.V.Ramasamy ‘Treatment of Municipal Solid Waste Leachate using Nutrient Film Technique’ “3rd Joint international conference on environmental science & climate change”, Karunya University , Coimbatore, Tamil Nadu 7-9th December, 2016.
2. Arunbabu V and E.V.Ramasamy ‘ A hybrid system of vertical flow constructed wetland and nutrient film technique for the effective treatment of municipal solid waste leachate’. *International Conference on Water: From Pollution to Purification (ICW 2016)*, Mahatma Gandhi University, Kottayam, Kerala, Dec. 12-15, 2016.
3. E.V Ramasamy and Sruthy S Nair (2016). Climate – smart soils: Influence of Earthworms in soil carbon dynamics’, *Proceedings of International Conference on*

'Environment and Health in Changing Climate (ICEHCC2016)', Bharathidasan University, Tiruchirappalli.

4. E.V Ramasamy (2016) 'Microplastics : An Emerging contaminant - with potential threat to aquatic systems - less studied in India' , presented in **LAKE 2016 :International Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats**, held at Alva's Education Foundation (R), Sundari Ananda Alva Campus, Vidyagiri , Moodbidri ,D.K.District , Karnataka.

Dr. CT Aravindakumar

1. Manoj P. Rayaroth, Usha K. Aravind, C.T. Aravindakumar, *Photocatalytic Degradation of Lignocaine in Aqueous Suspension of TiO₂ Nanoparticle: Mechanism of Degradation and Mineralization*, Proc.- Fourth International Conference on Advanced Oxidation Processes (AOP 2016), Dec. 17-20, 2016, Goa
2. D. Dineep, K.K. Nejumal, U.K. Aravind, C.T. Aravindakumar, *Photo-transformation of mefenamic acid in natural water: A Mass Spectrometric Study*, Proc.- Fourth International Conference on Advanced Oxidation Processes (AOP 2016), Dec. 17-20, 2016, Goa
3. K.K. Nejumal, D. Dineep, P.R. Manoj, U.K. Aravind, C.T. Aravindakumar, *Sono and photochemical transformation of isoniazid in aqueous medium: Effect of inorganic and organic ions on degradation*, Proc.- Fourth International Conference on Advanced Oxidation Processes (AOP 2016), Dec. 17-20, 2016, Goa
4. K.K. Nejumal, D. Dineep, S. Ajai, U.K. Aravind, C.T. Aravindakumar, *Degradation of the beta blockers, propranolol by Ultrasound*, Proc.- Fourth International Conference on Advanced Oxidation Processes (AOP 2016), Dec. 17-20, 2016, Goa
5. Manoj P. Rayaroth, Usha K. Aravind, C.T. Aravindakumar, *Effect of Inorganic ions on the Sonochemical Degradation of Triphenylmethane Dyes*, Proc.- Fourth International Conference on Advanced Oxidation Processes (AOP 2016), Dec. 17-20, 2016, Goa
6. P.R. Manoj, Usha K. Aravind, C.T. Aravindakumar, *Impact of Inorganic Ions on the Sonochemical Degradation of Triphenylmethane Dyes*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
7. Jain Maria Thomas, N.R. Vishnu, C.T. Aravindakumar, Usha K. Aravind, *Polyelectrolyte Functional Bilayers for the Removal of Model Emerging*

- Contaminants*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
8. M.K Athullya, D. Dineep, Mary Lidiya Mathew, C.T Aravindakumar, Usha K. Aravind, *Identification and Removal of Surfactants from Grey Water*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 9. D. Dineep, Usha K. Aravind, C.T Aravindakumar, *Sunlight Induced Photo Transformation of Labetalol in Natural Conditions*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 10. K.K. Nejumal, D. Dineep, P.R Manoj, Usha K. Aravind, C.T Aravindakumar, *Sonochemical Degradation of Bisphenol S in Aqueous Medium*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 11. K.K. Nejumal, D. Dineep, Aneesh Danam, C.T Aravindakumar, Usha K. Aravind, *Screening of Glyphosate and its Metabolite in Sediment Samples of a Selected Backwater Canal of Kottayam District, Kerala, Using UPLC-Q-ToF-MS*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 12. P.R Manoj, Usha K. Aravind, C.T Aravindakumar, *Effect of Ligands on the Activity of nFe/Fes- Activated Persulfate for the Oxidative Degradation of Water Pollutants*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 13. Jeeva M. Philip, D. Dineep, Usha K. Aravind, C.T Aravindakumar, *Occurrence of Emerging Contaminants in a Conventional Drinking Water Plan*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 14. C.S. Shalumon, Usha K. Aravind, C.T Aravindakumar, *Spatial Distribution and Toxicological profile of Uranium (U) in Drinking Water Sources of 4 Different Districts of Kerala, India*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
 15. John Richard Thomas, Usha K. Aravind, C.T Aravindakumar, *Seasonal Variation of Chemical Composition of Rain Water in a Rural Location in Kerala, India*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam

16. C.Jisha, Usha K. Aravind, P.T. Nguyen, C.T Aravindakumar, *Mass Spectrometric Fragmentation of Nitenpyram: The Complete Gas Phase Ion Chemistry and an Illustration of Solvent Effect on the ESI-MS*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
17. Misha T. Elias, C. Jisha, C.T Aravindakumar, Usha K. Aravind, *Multi Stage Mass Spectrometric Analysis of Histamine H2 receptor Antagonist, Cimetidine*, Proc.- International Conference on Water: From Pollution to Purification (ICW 2016), Dec.12-15, 2016, Kottayam
18. P. Nikhil Chandra, C. T Aravindakumar, Usha K. Aravind, *Design, Development, Characterisation and Application of Multilayered Biopolymer for Water Purification*, Proc.- National Seminar on Modern Trends in Chemistry and Polymer Chemistry, Nov. 24-26, 2016, Attingal
19. G. Akhil, C. T Aravindakumar, Usha K. A, *Effect of External Dopant in Controlling the Morphologies of CHI/PAA Multilayer*, Proc.- International Conference on Materials for the Millennium (MATCON), Jan.14-16, 2016, Kochi
20. C. Jisha, M. Muneer, C. T Aravindakumar, Usha K. A, *Confining Different Pressure Driven Separation Aspects into Single CHI/PSS Multilayered Membranes*, Proc.- International Conference on Materials for the Millennium (MATCON), Jan.14-16, 2016, Kochi
21. M. Manju, C. T Aravindakumar, Usha K. A, *Probing the Binding of Cytochrome C with Ovalbumin in Solution and in Immobilized State*, Proc.- International Conference on Materials for the Millennium (MATCON), Jan.14-16, 2016, Kochi

Dr. Mahesh Mohan

1. VG Gopikrishna, VM Kannan, KP Krishnan and Mahesh Mohan, 2016, Mercury and other metals in the surface waters of Arctic Fjord, Svalbard. International conference on Water – Pollution to Purification, December 12-15, Kottayam.
2. Krishna MP and Mahesh Mohan. 2016. Forest litter bacteria for waste water treatment. International conference on Water – Pollution to Purification, December 12-15, Kottayam.
3. MK Vishnusagar, Mahesh Mohan, VG Gopikrishna, Bineesh MB, Abdul Shukkoor. 2016. Heavy metal contamination of sediments in Kongsfjorden an Arctic Fjord in NyAlesund, Norway. International conference on Water – Pollution to Purification, December 12-15, Kottayam.

4. MR Sijimol , Mahesh Mohan and KK Nejumal. 2016. Perchlorate degradation in drinking water- a lab scale study. International conference on Water – Pollution to Purification, December 12-15, Kottayam.
5. Navya C, Arunbabu V, Mahesh Mohan. Mercury Accumulation in a Unique Indian Agricultural Wetland Ecosystem, International Conference, Coimbatore
6. Navya C, Arunbabu V, Mahesh Mohan. 2016. Accumulation of mercury in rice plants collected from an unpolluted paddy field in India. SETAC Asia-Pacific conference, Singapore, 16-19 September

Dr. Sylas V.P.

1. C.S Praveen Kumar and **V.P Sylas**. Phycoremediation and the potential of lipid production using cashew nut processing waste water. 28th Kerala Science Congress. Calicut University, Malappuram, 28 – 30 January 2016.
2. C.S Praveen Kumar, Jerry Mechery, V. Ambily, D.M. Thomas and **V.P Sylas**. Waste water treatment and subsequent lipid production potential of fresh water microalgae. National Seminar on Environmental Issues - A factual Profile, SVRNSS college, Vazhoor. 4-5 February 2016.
3. C.S Praveen Kumar and **V.P Sylas**. Paper and pulp mill waste water treatment using indigenous microalgae, chlorella sp and chlamydomonas sp and subsequent lipid production. International Conference on Water. 12-15 December 2016.
4. C.S Praveen Kumar, Jerry Mechery, Raisa Kabeer and **V.P Sylas**. Phycoremediation of cashew nut processing waste water and pulp and paper mill effluent using native chlorella species. 29th Kerala Science Congress, Marthoma college , Thiruvalla, 28-30 January 2017.
5. Jerry Mechery & **Sylas VP** (2016). Biohydrogen Production from *Eichhornia crassipes* by *Pseudomonas aeruginosa* through Dark Fermentation. (Poster). 28th Kerala Science Congress, Calicut University, Malappuram, 28 – 30 January 2016.
6. Jerry Mechery & **Sylas VP** (2016). Biohydrogen: A promising energy carrier from bacterial communities (Oral Presentation). National Seminar on Environmental Issues - A factual Profile, SVRNSS College, Vazhoor, 4-5 February 2016.
7. Raisa Kabeer, & **Sylas VP** (2016). Multiple Antibiotic Resistance of Bacteria Isolated from the rhizosphere of Water Hyacinth, an invasive weed in the Kuttanad Wetland

Ecosystem, Kerala (Poster). 28th Kerala Science Congress , Calicut University, Malappuram,28 – 30 January 2016

8. Daniya M.Thomas, Sinu Thomas, Ambily V. and **Sylas V.P.** (2017) An experimental study on the carbon capture capacity of biochar, activated carbon and CNT : A comparative analysis, 29th Kerala science congress, Mar Thoma college, Thiruvalla.
9. **Sylas V.P.** and Prasanth Narayan S. (2017). Status and threats of aquatic biodiversity of Kuttanad : an ecological perspective. Symposium on Pampa: environment. Governance and culture. Organised by KN Raj Centre, MG University, Kottayam. 19 -21 May 2017 at Kottayam.
10. Vigimol P.V. and **Sylas V.P.** Assessment of Public health and water quality: A case study of Cheruthana Gramapanchayath and river Pamba in Kuttanad, Kerala, India. Symposium on Pampa: environment. Governance and culture. Organised by KN Raj Centre, MG University, Kottayam. 19 -21 May 2017 at Kottayam.

Details regarding Recognitions achieved by the faculty members (2016-17)

Dr. EV Ramasamy

1. Dr E.V. Ramasamy, Associate Professor , has participated in the in the **World Environment Day celebration** of S.V.R. N.S.S. college, Vazhoor as a resource person and delivered an invited lecture on ‘ Environmental Biotechnology for Waste Management’ , June 08, 2016.
2. **Dr E.V. Ramasamy**, Associate Professor , has participated in the in the Seminar on ‘Developing Integrated Solid Waste Management Plan’organised by Marthoma College , Tiruvalla , as a resource person and delivered an invited lecture on ‘**Environmental protection and waste management in India with special reference to Kerala**’ , **June 08, 2016.**
3. **Dr E.V. Ramasamy**, Associate Professor , has been invited as the subject expert in the selection committee (interview board) meeting in selection of ‘Nature education officer’ at **Periyar Tiger Reserve (PTR)foundation , Thekkady, on June 27, 2016.**
4. Dr E.V. Ramasamy, Associate Professor, has participated in the **Technical Committee** meetings on 11.07.2016 and on 29.07.2016 in the Chamber of Executive Director, **Suchitwa Mission**, Local Self Governance Department (LSGD), Govt. of Kerala, Thiruvananthapuram.

5. Dr E.V. Ramasamy, Associate Professor , has participated in the in the one-day Seminar on ‘Methods in Environmental Research’ organised by PG Dept of Botany, Bishop Abraham Memorial College, Thuruthicad, Pathanamthitta, as **Key speaker** of the day and delivered an invited lecture, July 15, 2016.
6. Dr E.V. Ramasamy, Associate Professor, has participated in the ‘Fifth Annual National Conference on Urbanization and Environment of Loyola Forum for Historical Research (LFHR),organised by Loyola Forum for Historical Research (LFHR), Loyola College, Chennai, as a **Invited speaker** and delivered an **invited lecture** on ‘Waste Management : Lessons from History’, July 21-22, 2016.
7. Dr E.V. Ramasamy, Associate Professor , has participated in the in the Seminar on ‘Biological Applications on Environmental Engineering’ organised by Cashew Export Promotion Council(CEPC) Laboratory & Technical Division,Cashew Bhavan, Kollam as a resource person and delivered an **invited lecture** on ‘Environmental Biotechnology for Waste Management’ , August 22, 2016.
8. Dr E.V. Ramasamy, Associate Professor , has participated in the ‘International Conference on ‘Environment and Health in Changing Climate (ICEHCC2016)’ organised by Bharathidasan University , Tiruchirappalli as a **Invited Speaker** and **delivered an invited lecture** on ‘**Climate – smart soils: Influence of Earthworms in soil carbon dynamics**’, September 14-16, 2016.
9. Dr E.V. Ramasamy, Associate Professor, has participated in the Technical Committee meeting on October 20th in the Chamber of Executive Director, Suchitwa Mission, Local Self Governance Department (LSGD), Govt. of Kerala, Thiruvananthapuram.
10. Dr E.V. Ramasamy, Associate Professor , has conducted PhD viva-voce as the external examiner at Gandhigram Rural Institute (GRI), Dindigul , Tamil Nadu on October 14th ,2016.
11. Dr E.V. Ramasamy, Associate Professor, has delivered the 2nd **Endowment Lecture** (Dr Shaju Thomas and Dr Sasikala K Joseph Endowment Lecture 2016) on ‘Waste Management : Wealth from Waste Approach ’, on November 03, 2016 at Department of Zoology, Nirmala College, Muvattupuzha.
12. Dr E.V. Ramasamy, Associate Professor , has served as a **resource person** for the Refresher Course in Environmental Science & Geo Sciences for College/University teachers conducted by the UGC-Human Resource Development Centre (HRDC), University of Calicut and delivered a lecture on ‘Phytoremediation’ , on November 16, 2016.

13. Dr E.V. Ramasamy, Associate Professor , has served as a resource person for the Refresher Course in Commerce & Management for College/University teachers conducted by the UGC-Human Resource Development Centre (HRDC), University of Kerala and delivered a lecture on ‘Waste Management & House Farming’ , on November 22, 2016.
14. Dr E.V. Ramasamy, Associate Professor , has served as the external examiner for the MTech project presentations (Phase-I) and evaluation of answer sheets at Centre for Pollution Control and Environmental Engineering, Pondicherry University, during November 29 – December 02, 2016.
15. Dr E.V. Ramasamy, Associate Professor has participated and served as Member of Local Organizing Committee and Chaired a technical session of the International Conference on Water (ICW-2016) held at School of Environmental Sciences, MG University, Kottayam during 12 -15, Decmeber 2016.
16. Dr E.V. Ramasamy, Associate Professor has participated as an **Invited Speaker** and delivered an invited lecture on ‘Microplastics : An Emerging contaminant - with potential threat to aquatic systems - less studied in India’ also served as member of the jury panel in selecting best paper presentation in **LAKE 2016 : International Conference** on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats, held at Alva’s Education Foundation (R), Sundari Ananda Alva Campus, Vidyagiri , Moodbidri ,D.K.District , Karnataka.
17. Dr E.V. Ramasamy, Associate Professor has been chosen as a subject expert by the **Kerala State Council for Science Technology and Environment (KSCSTE), Thiruvananthapuram** in screening and evaluation of research papers submitted for oral and best paper competition in the forthcoming 29th Kerala Science Congress, to be held during Jan 28-30,2017,at Marthoma College, Thiruvalla, Kerala.
18. Dr E.V. Ramasamy, Associate Professor has been chosen as a expert member by the Kerala State Council for Science Technology and Environment (KSCSTE), Thiruvananthapuram as the **judging panel member** in selecting best oral and poster paper presentations during the **29th Kerala Science Congress, held during Jan 28-30,2017,at** Marthoma College, Thiruvalla, Kerala.
19. Dr E.V. Ramasamy, Associate Professor, has participated in the Technical Committee meeting on January 21, February 12 in the Chamber of Executive Director, **Suchitwa Mission, Local Self Governance Department (LSGD), Govt. of Kerala, Thiruvananthapuram.**

20. Dr E.V. Ramasamy, Associate Professor , has participated as an expert member of the **Technical Committee** for an on a site visit of Solid waste Management facilities near Mumbai as a field inspection visit during February 5, and 6, 2017 organised by Suchitwa Mission, Local Self Governance Department (LSGD), Govt. of Kerala, Thiruvananthapuram.
21. Dr E.V. Ramasamy, Associate Professor, has delivered **World Water Day special Lecture on ‘Wetlands ’**, on February 01, 2017 at Department of Biotechnology, Konni College, Pathanamthitta.
22. Dr E.V. Ramasamy, Associate Professor , has served as **a resource person for the Refresher Course and Orientation programmes** for College/University teachers conducted by the **UGC-Human Resource Development Centre (HRDC), University of Kerala** during January 19 and February 10 , 2017 respectively.
23. Dr E.V. Ramasamy, Associate Professor, has delivered **Invited Lecture on ‘Waste Management ’**, on February 15, 2017 in **National Seminar on Environmental Degradation and Climate Change** organised by School of Environmental Studies , **CUSAT, Kochi.**

Dr. C.T. Aravindakumar, Professor

1. Expert Member, Antarctic Selection Committee – 2016
2. Expert Member, Arctic selection committee – 2016
3. Group leader in Environmental Science, Polar science policy deduction for Ministry of Earth Science, 2016
4. Executive committee Member, Institute of Climate Change, Kottayam, Govt of Kerala
5. Governing Committee Member, Institute of Climate Change, Kottayam, Govt of Kerala
6. In the Expert Panel of India-UK water research for identifying the thrust area, DST, Govt of India

Dr. Mahesh Mohan

1. Indian participant of the working group *WP 1: Contaminant flow and deposition in the Kongsfjorden/Krossfjorden system* of the **Kongsjorden flagship programme**, Svalbard, Norway.
2. Collaborator of major National programme on **Survey and exploration of Hydrothermal sulphide vents/ deposits in parts of Central and South-West Indian ridges**, by ESSO-NCAOR, MoES

Dr. Sylas V.P.

1. **Dr. Sylas V.P.** participated in the State level Consultation workshop of the ‘India Highrange Landscape project’ supported by GEF- UNDP-GOI, organized by LSG Dept. Govt. of Kerala on 20 December 2016at Thiruvananthapuram
2. **Dr. Sylas V.P.** – Acted as the expert panel member for the evaluation of the research papers of Kerala Science Congress (under the area of Environment Science, Forestry and Wildlife) on 21 December at KFRI, Peechi organized by KSCSTE, Govt. of Kerala.

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	3	DoECC, BRNS, NCAOR, KSCSTE	59	22
Minor Projects				
Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the University/ College				
Students research projects (<i>other than compulsory by the University</i>)				
Any other(Specify)				
Total				

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them

3.19 No. of Ph.D. awarded by faculty from the Institution

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF SRF Post-Doctoral Fellows Other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

I. National Science Day Celebrations - 2016

The School of Environmental Sciences celebrated the **National Science Day -2016** in collaboration with Kerala State Council for Science , Technology and Environment [KSCSTE] supported by Department of Science & Technology (DST), Govt. of India, on February 25th in a grand manner. As per the proposal, we have invited a total of 60 students from different high schools nearby the University. Selected students of St. Ephrems H.S., Mannanam, St. Aloysius High School, Athirampuzha, Govt. Medical College VHS, Arpookkara, G.M.R/H.S, Ettumanoor and Govt. H.S.S. Kudamaloor were participated in the NSD – 2016.

The **National Science Day – 2016** was celebrated as two sessions. The forenoon session was entirely allotted for the school children for Elocution competition, poster making competition and video documentary exhibition. Students and teachers deputed by the above mentioned schools were participated in this programme. Three programmes were arranged for them. The first programme was on **Elocution Competition** on the topic '*Indian Nirmitham – Saadhythakalum velluvikalalum* (Make in India – Possibilities and Challeges). A total of 10 contestants were participated in the competition. Dr. E.V. Ramasamy, Dr. Christopher G., Dr. Usha K. Aravind and Dr. Mahesh Mohan were in the judging panel and they evaluated the contestants based on the content, presentation style and other performance. Ms. Sreelekshmi A.S STD VIII, GMRHS Ettumanoor won the first prize, Ms. Bibithamol Babu, STD IX, MCVHSS, Arpookara won the second prize and the third prize won by Ms. Ahalyamol M.R. of GMRHS Ettumanoor . Winners were awarded with trophy and certificate. Second programme was on the **Poster making competition** in which the *Vikasitha India – S& T kandupidathathiloode* ('Developed India – through S&T innovations)' was the topic. All the students were participated in the programme and have provided with chart paper, colour sketches, pencil, eraser etc. (even though we informed the school teachers earlier, very few students only bring the colour pencils and other colouring materials). Ms. Athullya Thankappan, STD VIII, GMRHS Ettumanoor won the first prize, Mr. Rohit K. Santhosh, STD VII, Govt HSS, Kudamaloor won the second prize and the third prize won by Mr. Arun Vijayan, St. Aloysius HSS, Athirampuzha. Certificate and trophy were distributed to the students at the valedictory function.

An invited talk was arranged on the afternoon session, **Prof. P.N. Thankachan**, Professor, Rajiv Gandhi Institute of Technology and President, Breakthrough Science Movement, Kottayam chapter has delivered a talk on **‘Make in India – S&T driven innovations’**. Students and faculty members from this School and other departments attended this session. (Dr. C. T. Aravindakumar (Professor & Director, School of Environmental Sciences), Dr. A.P. Thomas (Director, Advanced Centre of Environmental Studies and Sustainable Development, MG University), Dr. E.V. Ramasamy (Associate Professor), Dr. Mahesh Mohan (Assistant Professor) and Dr. Syllas V.P. (Assistant Professor & Co-ordinator, NSD -2014) were also present.

A video documentary exhibition on ‘Pole to Pole’ by BBC was also done. Science Lab visit was also arranged for the students. Laboratories of the School (SES) with major and minor instruments were explained by the researchers to the students. Instruments like LC-MS, LC-Q-ToF, GC –MS, HPLC, TOC, Mercury analyser, ICP-MS etc. were demonstrated for the students. RS & GIS lab, Analytical Lab, Environmental Microbiology Lab and Earthworm lab was also visited by the students.

All the boards, banners and pamphlets were put up with the name Kerala State Council for Science Technology and Environment (KSCSTE) and supported by Department of Science and Technology, Govt. of India along with the school’s name as a collaborator of the programme. Lunch and refreshments were arranged for the participants during NSD – 2016.

II. World Environment Day – 2016

World Environment Day (WED) is the United Nations’ most important day for encouraging worldwide awareness and action for the protection of our environment. Since it began in 1974, it has grown to become a global platform for public outreach that is widely celebrated in over 100 countries. WED serves as the ‘people’s day’ for doing something to take care of the Earth or become an agent of change. That ‘something’ can be focused locally, nationally or globally; it can be a solo action or involve a crowd – everyone is free to choose. Each WED is organized around a theme that focuses attention on a particularly pressing environmental concern. WED 2016 is themed on the illegal trade in wildlife under the slogan ***Go Wild for Life.***

On this occasion, Club of Environmental Students (CLENS) of School of Environmental Sciences, Mahatma Gandhi University celebrated the WED – 2016 in the

campus as a whole week programme from 05th to 10th June, 2016. The whole programme was jointly organized by the School and the Advanced Centre of Environmental Studies and Sustainable Development (ACESSD), an inter University centre. The entire programme was supported by State Bank of Travancore (SBT), MG University Campus branch. MG University has issued a circular regarding the Environment Day celebrations.

On 5th June, members of CLENS planted few saplings in the campus. On 6th June, Hon'ble Pro Vice-Chancellor, Dr. Sheena Shukkoor officially inaugurated the programme. She noted the relevance of environmental conservation for the sustenance of life on earth. Individuals can play a crucial role for the conservation, she pointed out. Dr. C.T. Aravindakumar, Director, SES welcomed the gathering and Dr. A.P. Thomas, Director inaugurated the distribution of tree sapling by handing over a *Kudampuli* sapling to Mrs. Asha Ashok, Manager, SBT MGU Campus. The trash bins, sponsored by SBT was received by Dr. Syllas V.P., President, CLENS.

Punarjani – A special programme for the *Conservation of rare, endangered and endemic* plant species was the key attraction of the WED 2016. Through *Punarjani*, a total of 420 tree sapling were distributed to the employees, students, faculty and general public through the '**tree kiosks**', which were opened at different locations of the campus. Local tree species like *nadan maavu, kudampuli, kadaplaavu, plavu, aanjili, ambazham, pera, nilanarakom, nelli, veppu, njaaval, muttapazham, elanji, neermaruthu* etc. were distributed. The remaining tree saplings were planted in the Jeevaka Live Laboratory of the School.

Attractive pamphlets containing school time table printed on one side with and a few environmental tips on the reverse side were distributed to the employees, students and to the people who had visited the tree kiosk. A total of 800 cards were distributed to Govt. Higher Secondary School, Arpookara and another 120 to Govt. Girls HSS, Ettumanoor.

As a part of the programme, CLENS had installed four trash bins at different locations of the University campus for collecting plastic and metal waste.

The valedictory session of WED 2016 had a seminar on energy and water conservation in which the extension work conducted by the students of the school with a main theme of **Social Education and Creation of Awareness** was presented by the students of the school. Professor Sabu Thomas, Director, IQAC was the chief guest.

We, the members of CLENS express our sincere thanks to the all the authorities of MG University especially Dr. Sheena Shukkoor, Pro-Vice Chancellor and Mr. M.R. Unni, Registrar for all the support. We also express sincere gratitude to Dr. Sabu Thomas, Director, IQAC, Mr. Thulasilal (Estate Officer) for their support. CLENS is wholeheartedly thanks to SBT MG University campus especially to Mrs. Asha Ashok and Mrs. Geetha for their support. We also express our sincere thanks to all those who participated in the programme.

III. Wild Life Week - 2016

The School celebrated the wild life week - 2016 with various programmes. Various posters made by the students of SES were displayed at the campus. The details of the programme as follows;

05 October 2016 – Photo exhibition

A Photo exhibition of Wild Flora of Western Ghats (Photos of Dr. Jomy Augustine) - open for students, staff and general public. The photo exhibition was inaugurated by Hon'ble PVC - Dr. Sheena Shukkoor. @ Assembly Hall, MGU. Dr. A.P. Thomas, Dr. Jomy Augustine, Dr. E.V. Ramasamy, Dr. V.P. Syllas and Dr. Mahesh Mohan were present on the occasion. A total of 234 people including students, staff and general public were seen the exhibition.

talk on Floristic Diversity of Kerala - Dr. Jomy Augustine @ Main Seminar Hall, SES on the same date at 11.00 a.m. He explained the significance for the conservation of Western Ghats with his field experience and photographs.

07 October 2016 – Invited Talk

An invited talk on 'Biodiversity of Western Ghats - by Dr. Kunjikirishnan, Professor (Rtd.), University College, Trivandrum at Main Seminar Hall, SES (11.a.m.) was arranged as the part of Wild Life week. He elucidated the invasion of foreigners into Kerala is due to the natural wealth of Western Ghats with several historical events. Students, researchers, faculty and non-teaching staff of the School as well as other Schools were participated in the programme.

IV. Swaad (The Food Fest) & Murdania -2016 (School Day)

The School celebrating a Food Fest every year known as *Swaadu* and the present year, the theme for 'Swaadu' was *Thani Naadan* (Traditional Variety). Both Swaad and Murdania celebrated on 25 November 2016 at SES. The members of the School have divided into 7 groups including faculties and each team have to make a traditional vegetarian and non vegetarian item for competition. All the teams were made delicious items and it was evaluated

by a team of experts (Two Chefs from Hotel Excalibur, Mr. Mathew Moozhiyil and Mrs. Annie, ASO, MGU). Prizes were given to first three positions. Lunch was also arranged for all the participants.

Murdania – 2016 is celebrated with variety of programmes like dance, skit, mime etc. on 25 November 2016 at SES.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area				
Class rooms	03	01	MG University	04
Laboratories	04	01	DST,KSCSTE	05
Seminar Halls	03			03
No. of important equipments purchased (\geq 1-0 lakh) during the current year.		2	Plan fund	2
Value of the equipment purchased during the year (Rs. in Lakhs)		100 Lakhs	Plan fund	100 Lakhs
Others				

4.2 Computerization of administration and library

2 computers + one printer/copier/scanner (Office)

2 computer + one printer + 1 photocopier (Library)

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value (Rs.)	No.	Value (Rs.)	No.	Value (Rs.)
Text Books	3456	10,00,000	29	84298	3485	10,84,298
Reference Books	2151	13,00,000	Nil	Nil	2151	13,00,000
e-Books, Journals, Digital Database, CD & Video	Through Inflibnet service					

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	45	2	135 ports					
Added	2							
Total	47							

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

Nil

4.6 Amount spent on maintenance in lakhs :

i) ICT	<input type="text"/>
ii) Campus Infrastructure and facilities	<input type="text"/>
iii) Equipments	<input type="text" value="4"/>
iv) Others	<input type="text" value="6"/>
Total :	<input type="text" value="10"/>

6.14 Initiatives taken by the institution to make the campus eco-friendly

1. Jeevaka Live Laboratory of the School - an area for habitat conservation model within the University Campus. Conservation of watershed, micro-habitats and related biodiversity within the campus. Potential and accessible area for systematic and periodic studies on vegetation and other species dynamics. Ideal habitats for learning and experimenting ecology, field biology aspects and techniques within the campus. Potential area for practicing taxonomic studies, biodiversity inventories, studies on phyto-sociology, insect-plant associations, soil chemistry, water quality, micro flora and fauna, etc.
2. Rainwater harvesting system for distillation purpose
3. Butterfly Garden in the Campus – 95 Species of butterflies were identified from the campus.
4. Waste Management: Installation of a Biogas plant in the campus for the management of food waste as well as the production of biogas.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

- Initiated a better research ambience -
 - a. Arctic Research Initiative
 - b. New labs with sophisticated instrumentation facility
 - c. SAIF Facility – initiated
 - d. Hydrothermal vent project
- Rain water for humanity : Installation of rain water harvesting structures at water scarce areas of Kuttanad and one structure installed at Campus for recycling of water for distillation
- CLENS (Club of Environmental Students) conducts programmes on environmental awareness in the campus and outside of the campus.
- Thursday club of this forum conducts weekly activities for its student members aiming to improve their communicative skills.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the Beginning of the year

- Conducted an Inter National conference on water – Pollution to purification in December 2016.
- Participated in the Polar research
- The research on the following areas have been initiated and the progress have been demonstrated through research publications
Advanced oxidation process; Phycoremediation; Biofuel; Mercury geochemistry, Polar Environment Research, MICrobila Fuel Cell, Air Pollution studies, Natural Fibre studies etc.
- Field studies in highranges have been conducted in HERC, Nedumkandam an out reach centre of the School.
- Established Vembanad Environment Research Centre with the Plan fund.

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

1. Operation of Department Development Fund (DDF) successfully for the past six years.
2. Rain water for humanity : Installation of rain water harvesting structure for the use of distillation in the department

7.4 Contribution to environmental awareness / protection

Invited talk by **Prof. P.N. Thankachan**, Professor, Rajiv Gandhi Institute of Technology and President, Breakthrough Science Movement, Kottayam on **‘Make in India – S&T driven innovations’**; Invited talk by Dr. Jomy Augustine on “Floristic Diversity of Kerala” during Wildlife week celebrations; Invited talk by Dr. Kunjikirishnan, Professor on Biodiversity of Western Ghats during Wildlife week celebrations; Environmental Awareness programmes were conducted to School Children during National Science Day and World Environment day (WED) celebrations

7.5 Whether environmental audit was conducted? Yes y No

8.Plans of institution for next year

- To Conduct a InterNational Workshop on water purification technologies.
- To strengthen the research by procuring of analytical instruments like continuous ambient air quality analysers.
- To implement the collaborative research work with international agencies.
- To give hands on training for MSc students
- To focus advanced research on the following thrust areas ;
Air pollution studies, Polar environment research, Microbial fuel cells
Advanced oxidation process ; Phycoremediation; Natural fibres studies,
Biofuel; Mercury geochemistry, Drinking water pollution

SCHOOL OF GANDHIAN THOUGHT & DEVELOPMENT STUDIES

2016-2017

Smt.Manjusha.K.A., Assistant Professor

Seminars Attended

1. Attended International Kerala History Conference on 11,12,13 of November 2016 organised by the Department of History, University of Calicut.
2. Attended 21st Annual Conference and International Seminar of Association of Third World Studies, South Asia Chapter, held at Shivaji University, Vidyanagar, Kolhapur, Maharashtra on 30th November, 1 and 2 December, 2016.
3. Attended Kerala History Congress, Second Annual Session on 20,21 and 22 December, 2016 at the Department of History, Union Christian College, Aluva.
4. Attended 77th Session of the Indian History Congress at University of Kerala, Thiruvananthapuram , from December 28-30, 2017.
5. Attended one day National Seminar on Management of Learning Disabilities jointly organized by the Department of Lifelong Learning and Extension, Institute of Research in Learning Disabilities and School of Behavioural Sciences at SBES Auditorium on 29/4/2017.

Workshops Attended

1. Attended Research Methodology Workshop in History “Writing Down to Writing Up : The Art and Craft of Historical Research “ organized by the Kerala History Congress in association with Kerala State Higher Education Council at Union Christian College, Aluva from January 16 to 21, 2017.

Workshops/Seminars Co-ordinated

1. Co-ordinated two day’s workshop on “Ageing Gracefully and Living Meaningfully” jointly organized by the Department of Lifelong Learning and Extension and School of Gandhian Thought and Development Studies, M.G.University, Kottayam, Kerala held at SGTDS, M.G.University on 26th and 27th April, 2017.

Extension Programmes Conducted

1. Co-ordinated the four day’s Indigenous Awareness Camp , “Sahastha 2017” jointly organized by the School of Gandhian Thought and Development Studies and Department of Lifelong learning and Extension, M.G.University, held at Kunchippara Tribal Settlement, Kuttampuzha Grama Panchayath, Ernakulam District from 27th to 30th May, 2017.

Papers Presented

1. Presented a paper titled “Human Rights and Tribal Development: A Critical Appraisal based on the Case study of Malaipandaram Tribes in Kattathi Tribal Settlement of Pathanamthitta District” in the International Kerala History Conference on 11,12,13 of November 2016 organised by the Department of History, University of Calicut.
2. Presented a paper titled “Use and Abuse of Posco Act: A Study on the Wedlock of the Tribes of Wynad District” in the 21st Annual Conference and International Seminar of Association of Third World Studies, South Asia Chapter, held at Shivaji University, Vidyanagar, Kolhapur, Maharashtra on 30th November, 1 and 2 December, 2016.
3. Presented a paper on “A Critical Evaluation on the present situation of the Malai Pandaram Tribes based on the Indigenous Human Rights prescribed by UNO” in the Kerala History Congress, Second Annual Session on 20,21 and 22 December, 2016 at the Department of History, Union Christian College, Aluva.

4. Presented a paper titled “ Land Degradation and Unsustainable Rural Livelihoods: The Case of Attappady Region” in the 77th Session of the Indian History Congress at University of Kerala, Thiruvananthapuram , from December 28-30, 2017.

Papers published

1. Published an article in the proceedings volume of the Kerala History Conference Second Annual Session titled “Indigenous Knowledge Systems of the Ulladan Tribe of the Coastal Areas of Kerala with special reference to their Culinary Culture, Occupational Patterns and its Scientific Implications”.
- **Grants Received from** Indian Council of Social Science Research, New Delhi.**Projects Undertaken** ICSSR Sponsored Research Project on ““ Human Rights and Tribal Development: A Comparative Study of the Malaipandaram Tribes in Pathanamthitta and Kollam Districts in Kerala” with a grant of Rs. 20,00,000/- (Twenty Lakhs Only)

SCHOOL OF INDIAN LEGAL THOUGHT

Dr Sunil Kumar Syriac

Certificates

THE DIFFERENTLY ABLED AND THE CRIMINAL LAW: THE QUENCH FOR EQUALITY

Sunil Kumar Cyriac*

Introduction

Ability is considered by many people as, a special gift from the God almighty and disability is usually considered as its absence. There are people who believe that disability is also a gift in another form by the god almighty. "Disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives". The Persons With Disabilities (Equal Opportunities, Protection of rights and Full Participation Act), 1995 gives an inclusive definition to disability by listing Blindness, Low vision, Leprosy-cured, Hearing impairment, Loco motor disability, Mental retardation, and Mental illness as disabilities. The Rights of Persons with Disabilities Act 2016 provides four categories of disabled persons including, person with disability² person with benchmark disability³ person with disability

* Assistant Professor & HOD, School of Indian Legal Thought, Mahatma Gandhi University, Kottayam.
1 Definition by WHO available at www.who.int/topics/disabilities/en/ (visited on 17-2-2015).
2 Sec 2 (s) 'person with disability' means a person with long term physical, mental, intellectual or sensory impairment which, in interaction with various barriers, may hinder his full and effective participation in society on an equal basis with others;
3 Sec 2 (r) "person with benchmark disability" means a person with not less than forty per cent. of a specified disability where specified disability has not been defined in measurable terms and includes a person with disability where specified disability has been defined in measurable terms, as certified by the certifying authority;

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**JUSTICE T.RAMACHANDRAN
MEMORIAL EVER ROLLING TROPHY
NATIONAL MOOT COURT
COMPETITION**

NOVEMBER 11 12 13

2016

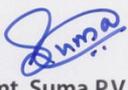
Certificate of Judge

*This is to certify that Mr. / Ms. Suresh Kumar Cyril,
Asst. Professor, SIKT, M. G. University, Kottayam,
has successfully acted as JUDGE in Preliminary / Semifinal Rounds in
the All India Moot Court Competition for Justice T. Ramachandran Me-
morial Ever Rolling Trophy Organized by Government Law College,
Thrissur, Kerala from 11th to 13th November, 2016.*




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Coordinator


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This is to certify that *Mr./ Ms. Binuh. Kumari Syrias*.....
of..... *Resource person*..... has acted
as..... *person*..... in the Two day National Seminar
on *Challenges in Strengthening ADR in India*, conducted by *The Centre for Criminal*
Laws, Government Law College, Ernakulam on 24th & 25th March 2017.

Dr. Bindu M. Nambiar
Hon. Director Centre for Criminal Laws



Dr. R. Biju Kumar
Principal

Smt. Liny Jose K.
Co-ordinator



Two day National Seminar on
CHALLENGES IN
STRENGTHENING
ADR IN INDIA



SCHOOL OF LEGAL STUDIES,
COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY,
KOCHI -682022



Three Day UGC - Sponsored National Seminar on
"PROTECTION OF MIGRANT WORKERS IN INDIA :
LEGAL AND SOCIAL CONCERNS"

in association with
BPCL- Kochi Refinery



This is to certify that Ms/^{Dr.} Gigi P. v., Asst Professor,
School of Indian Legal Thought, Kottayam
has participated/presented a paper/acted as resource person/chaired a session in the three day
national seminar on "Protection of Migrant Workers in India : Legal and Social
Concerns" held at School of Legal Studies, Cochin University of Science and Technology,
Kochi-22, from 19-21 January, 2017. The title of the paper Session 6:
"Migrant Labourers - Need for protection
from health hazards.

Dr. P.S. Seema
Director

Dr. Vani Kesari A
Co-ordinator

Dr. Binu Mole K,
Co-ordinator

Date 21/1/17
Kochi-22





JUSTICE V. R. KRISHNA IYER CHAIR ON HUMAN RIGHTS

SCHOOL OF LEGAL STUDIES
COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY, KOCHI- 682 022

**Five Day National Conference on Health Care System
in India and Human Rights Concerns**

CERTIFICATE

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INDIAN LEGAL THOUGHT, KOTTAYAM

..... has Participated/
~~Presented/ Acted as Resource Person/ Chaired a Session~~ in the five day National Conference
on Health Care System in India and Human Rights Concerns held at School of Legal Studies,
Cochin University of Science and Technology, Kochi- 22, from 05-09 December 2016. The title of
the Paper/Session was ACCESS TO MEDICAL RECORDS-
NEED FOR LEGISLATION

Seema
Dr. P. S. Seema
Director

Justin
Ms. Jean Vinitha Peter
Co-ordinator

Harigovind
Mr. P. C. Harigovind
Co-ordinator



Kochi 22
09-12-2016.

Editors

Dr. Vani Kessari A.

Assistant Professor
School Of Legal Studies,
CUSAT, Cochin- 682022

Dr. Binu Mole K.

Assistant Professor
School Of Legal Studies
CUSAT, Cochin-682022

Student Editors

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Nandu Sam Jose, Needi K. Dinamany,
Krishna S., Arya R., Prerith P. Joseph,
Jithesh P Shaji, Ram Vinayak & Dina Joy**
*I and IV semester, L.L.M Students,
School of Legal Studies,
CUSAT, Cochin 682022*



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January 20, 2017

To,

Dr. Gigi P.V
Assistant Professor
School of Indian Legal Thought
M.G University, Kottayam

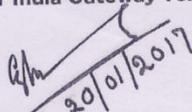
Sub: Awareness Program on Workplace harassment

Dear Dr. Gigi P V,

On behalf of India Gateway Terminal Pvt. Ltd. (IGTPL), I would like to express our sincere gratitude for accepting the invitation to conduct an awareness session on Workplace harassment at IGTPPL on 9th December 2016. The session was very informative and guided the employees on workplace harassment policies/procedure. It was well appreciated by our employees, who attended the session. We have received excellent feedback from all participants.

Management of IGTPPL/DP World, Cochin is keen to have such awareness sessions in the future as well.

For India Gateway Terminal Pvt. Ltd


20/01/2017
Girish C Menon
General Manager - Human Capital, IR & Admin

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MIGRANT LABOURERS - NEED FOR PROTECTION FROM HEALTH HAZARDS

*Dr.Gigi P.V, Assistant Professor,
School of Indian Legal Thought, M.G.University, Kottayam

Abstract

Globalization, Urbanization and the search for better livelihood has led to an increase of migrant labourers. In some regions of India three out of four households include a migrant. About two out of ten Indians are internal migrants. The impact of migration of labourers and their households has a significant impact on the social, economic and political conditions of India. The increase in the migration rate of labourers can be due to several factors that contrast themselves. Increasing unemployment conditions, lack of resources, environmental conditions degradation of natural resources force the people to move. These push factors are in contrast with the pull factors like better employment opportunities, wages, good educational facilities, urbanization, better communication, commutation factors, life styles and economic factors.

Introduction

Migrant labourers are usually employed in dangerous, dirty and degrading jobs. These are jobs which the local population of the developed state would not take up. These jobs are invariably with more occupational hazards than other jobs. Migrant labourers are working on construction sites commonly suffer from falls, injuries caused by machine, amputation and crush injuries. Various health and family care programmes are not accessible to Migrant labourers. For women workers, there is no provision of maternity leave, forcing them to resume work almost immediately after child birth. Workers, particularly those working in tile factories and brick kilns suffer from occupational hazards such as body ache, sunstroke and skin irritation. Each state has a unique epidemiological profile of communicable diseases. For example, Orissa is hyper endemic to malaria. When labours from Orissa migrate to some other states, such as Kerala, where the potential vector is available but the disease was absent, this have been attributed largely to migration. The migrant labours are working in unorganized sectors and live in unhygienic and polluted environment. This is vulnerable to health problems and sickness. Migrant labourers who are employed in construction sites, micro projects, quarries, mines and highway projects live in hazardous environment and vulnerable to air water pollution leading to kidney and lung disorders. Most of them live in open spaces or make shift shelters in spite of the Contract Labour Act which stipulate that the contractor or employer should provide suitable accommodation. The National Commission on Rural Labour in India estimated that more than 10 million circular migrants in the rural areas alone. These include an estimated 4.5 million inter-state migrants and 6 million intra-state migrants. The Commission pointed out that there are large number of seasonally migrant workers in the agriculture and plantations, brick kilns, quarries, construction sites and fish processing. The problem of seasonal migrant workers in the sugar industry and other agro-based industries is not a new phenomenon in India. According to the Directive Principles of State Policy of the Indian Constitution, the state is required to secure for the citizens both men and women to right to an adequate means of livelihood, protection against abuse and exploitation of worker's, economic necessity, protection of their health and strength. It also secure for children opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity. Constitution protects children and youth against exploitation and moral and material abandonment. Right to health is recognized as fundamental right and also integral part of human rights in India. The health hazards of these vulnerable communities are to be considered seriously when they are working in hazardous industries.

Women constitute more than one-third of the labour in the construction industry. Female migrant labourers face several important gender-based problems, including gender-based discrimination at work and violence. In the absence of supportive environment and social system, this can have a significant impact on the physical and mental health of these women.



**Kerala Institute of Local Administration
Mulamkunnathukavu, Thrissur-680581**

DUTY CERTIFICATE

This is to certify that Shri/Smt. *Dr. Gigi P.V. Assistant Professor,*
School of Indian Legal Thought, Mahatma Gandhi University, Kottayam.
has attended "ToT – Peoples Plan Campaign - 13th Five Year Plan" on 03.05.2017 at KILA.
He/She is eligible for duty leave as per Government Order No. G.O.(Rt)/4451/95/LAD
dated 26.07.1995.

DIRECTOR

Date : 03.05.2017



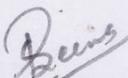
 

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**Five Day National Conference on Health Care System
in India and Human Rights Concerns**

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This is to certify that Mr./Ms. Dr. M. C. Pramodan.....
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School of Indian Legal Thought, Kottayam.....
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on Health Care System in India and Human Rights Concerns held at School of Legal Studies,
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Co-ordinator


Mr. P. C. Harigovind
Co-ordinator

Kochi 22
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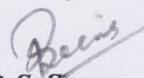
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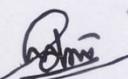
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Associate Professor.....
School of Indian Legal Thought, Kottayam.....
..... has Participated/
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on Health Care System in India and Human Rights Concerns held at School of Legal Studies,
Cochin University of Science and Technology, Kochi- 22, from 05-09 December 2016. The title of
the Paper/Session was SESSION 2 "HEALTH CARE SYSTEM & INSTI-
TUTIONAL RESPONSIBILITIES".....


Dr. P. S. Seema
Director


Ms. Jean Vinitha Peter
Co-ordinator


Mr. P. C. Harigovind
Co-ordinator



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NATIONAL SEMINAR

on

ENVIRONMENTAL PROTECTION AND LAW : RETROSPECT AND PROSPECT

March, 25th & 26th, 2017

CERTIFICATE

This is to certify that Prof. / Dr. / Sri. / Smt. Prof. M.C. Pramodan, Associate Professor, School of Indian Legal thought, M.G. University, Kottayam, Kerala has participated as a Resource person. ~~Et~~ has Participated / Presented a paper on "Damages in Environmental Law" in the National Seminar held on March, 25th & 26th, 2017.

Nagarjuna Nagar
Date : 26-3-2017



L. Jayaram
Prof. JAYASREE LAKKARAJU
Director

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DOMESTIC MIGRANT LABOURERS – A CRITICAL ANALYSIS OF LEGAL AND POLICY ISSUES

*Dr. A.P. Rajeesh, Assistant Professor, School of Indian Legal Thought,
MG University, Kottayam

Abstract

Though migration from one country to another country and one place to another place in search of better living condition is as old as human history, the legal, social, cultural and ethical problems of migration are often unfathomable. Of late, the migration of destitute especially from countries like Iran, Cyria, Afghanistan formed major news in media. The attitude of Government and local people of the place to where they have migrated have led to serious controversies. However, it is to be noted that in such situations there are different laws and national and international organizations to deal with problems of migrant. Though the legal issues involved in migration from one part of a country to another part is relatively less serious compared to migration from one country to another country, in a country like India where social and cultural values differ from states to states and division of States is mainly based on language, large scale migration of labourers from one State to another State could cause serious social and cultural problems which is somewhat equivalent to migration from one country to another country in some other parts of the world. The paper is confined to legal, social, cultural, linguistic and such other incidental issues related to migration of labourers from other states to state of Kerala and the possible solutions.

Introduction

The matter could be approached in two different angles. First, subject to the restrictions, the Indian Constitution recognizes the freedom to move freely throughout the territory of India and the freedom to reside and settle anywhere in India¹. Secondly, the Indian Constitution recognizes the separate identity and existence of States through various constitutional provisions². For decades Kerala peoples migrated to different parts of the country, including Madras, Calcutta, Delhi, Bombay and many other parts of the country. Further the migration of people from Kerala to different parts of the world including Gulf countries, Europe and America formed the basis of Kerala economy and a revolution in Kerala culture. However, the recent trends in Kerala are different. In 1990s the labour sector of Kerala was mainly labourers from Tamil Nadu. The labourers from Tamil Nadu were more adaptable to Kerala for multiple reasons including cultural similarity between the States, linguistic similarity between Tamil and Malayalam. Food habits etc. However since 2000 onwards Kerala is witnessing large scale migration of labourers to the state from different parts of the country including, West Bengal, Orissa, Assam, Bihar etc. The present migrant labour community could not be compared with the labourers from Tamil Nadu. Now the migrant labour community in Kerala mainly consists of labourers from North India and there are substantial changes in culture, values, language, food and in many others between Kerala people and the migrant labour community. There are no serious studies regarding the cultural impact which they have created in Kerala community especially in the labour culture except a study conducted by Gulati Institute of Finance and Taxation for the Kerala Government in the year 2013. The study is actually a data collection and it analyses only the fringe of the problem. However the collected data indicates that migration of labourers from other States especially from the northern States poses serious issues in the

¹Article 19 (1) (d), All citizens shall have the freedom to move freely throughout the territory of India. Further According to Article 19 (1) (e) All citizens shall have the right to reside and settle in any part of the territory of India. However the rights under Article 19(1) (d) and 19 (1) (f) is subject to the restriction contained under Article 19(1) (5) According to which Nothing in sub – clauses (d) or (e) of the said sub – clause shall affect the operation of any existing law in so far as it imposes, or prevent the state from making any law imposing, reasonable restriction on the exercise of any of the rights conferred by the said sub – clauses either in the interest of general public or for the interest of the general public.

²The first Article to the Indian Constitution itself says that India, that is Bharat, shall be union of States.

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LOCAL SELF GOVERNMENT AND THEIR ROLE IN PROTECTING AND PROMOTING THE RIGHTS OF ELDERLY

Dr Sheeba Pillai

INTRODUCTION

Global Age Watch Index (GAWI), developed with the UN fund for population and development which was released on International Day of Older Persons, ranks India a poor 73 out of the 91 countries sampled¹. India's ranking is woefully low compared to neighbour Sri Lanka that has been ranked 36 while Nepal (77), Pakistan (89) and Afghanistan (91) score even worse.

Beginning with the Universal Declaration of Human Rights, going onto the many International Instruments - including the Covenants on Economic Social and Cultural Rights, on Civil and Political Rights as well as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) - there are many references to the Rights of all. The Declaration on Social Progress and Development in 1969, for the first time specifically mentions old age².

The UN adopted the 1st International Plan of Action on Ageing in Vienna in 1982, and it took until 1991 for the General Assembly to adopt the UN Principles for Older Persons³ and its 4 main themes independence, participation, care, self-fulfillment and dignity. The Committee on Economic, Social and Culture Rights adopted the General comment no 6 on the Economic and Social, and Cultural Rights of Older Persons⁴ in the year 1995.

In 1999, with the International Year of Older Persons⁵, came the Conceptual Framework based on the Plan and Principles with 4 priority areas: (a) The situation of older persons, (b) individual lifelong development, (c) the relationship between generations, (d) the interrelationship of population, ageing and development. Finally, in Madrid in 2002, 20 years after, the 2nd World Assembly on Ageing (WAA) adopted unanimously a Political Declaration and an International Strategic Plan of Action on Ageing.

The rights stipulated for the older persons in international instruments stem from the principles of dignity and non-discrimination. The rights of older persons can be divided into three main categories: protection,

participation and image. Protection refers to securing the physical, psychological and emotional safety of older persons with regard to their unique vulnerability to abuse and ill treatment. Participation refers to the need to establish a greater and more active role for older persons in society. Image refers to the need to define a more positive, less degrading and discriminatory idea of who older persons are and what they are capable of doing⁶.

INDIAN SCENARIO

The Constitution of India directs the State to make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want within the limits of economic capacity and development⁷. There are several programmes and schemes in place like the National Policy on Older Persons (NPOP) which was drafted in 1999 way ahead of the Madrid International Plan of Action on Ageing (MIPAA), when less than 7 per cent of the population was aged 60 and above. The policy provides broad guidelines to State Governments for taking action for welfare of older persons in a proactive manner by devising their own policies and plans of action. The policy defines 'senior citizen' as a person who is 60 years old or above⁸. A National Council for Older Persons (NCOP) was constituted in 1999 under the Chairpersonship of the Minister for Social Justice and Empowerment to oversee implementation of the Policy. The Council was re-constituted in 2005 with members comprising Central and State governments representatives, representatives of NGOs, citizen's groups, retired person's associations, and experts in the field of law, social welfare, and medicine. There is no mention of local level representatives is something to be noted. An Inter-Ministerial Committee on Older Persons comprising twenty-two Ministries/ Departments, and headed by the Secretary, Ministry of Social Justice & Empowerment is another coordination mechanism in implementation of the NPOP. An Integrated Programme for Older Persons (IPOP) is being implemented since 1992. A Non-Plan Scheme of Assistance to Panchayati Raj Institutions/ Voluntary Organisations/ Self Help Groups for Construction of Old Age Homes/ Multi Service Centres for Older Persons was started in 1996-97.⁹

There are many schemes being implemented by other ministries too like the Ministry of Health & Family Welfare¹⁰, Ministry of Railways,¹¹ Ministry of Finance¹², Ministry of Civil Aviation¹³, Ministry of Road Transport and

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RIGHT TO EDUCATION OF MIGRANT CHILDREN IN INDIA

*Dr Sheeba Pillai, Assistant Professor,

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Abstract

“Education lays foundation of good citizenship and is a principle instrument to awaken the child to intellectual and cultural pursuits and values in preparing the child for later professional training and helps him to adjust to new environment. Education therefore should be committed to the social, political or economic needs of our developing nations fostering secular values, breaking the barriers of casteism, linguism, religious bigotry and should act as an instrument of social change. Migration is a growing phenomenon and with the burgeoning of the economy, there is bound to be an increase in migration. Hence it is essential that States take urgent steps to accommodate and tackle the various issues and particularly the problem highlighted in this paper and that is right to equal accessibility to basic education for the children between the age of 6-14 years which is their fundamental right.”

Introduction

The value of education cannot be undermined. In the case of *Maharashtra State Board of Secondary and Higher Education v K.S. Gandhi*¹, the Apex opined that education means a process which provides for intellectual, moral and physical development of a child for good character formation, mobility to social change including necessary awakening among the people. Education promotes intellectual, moral and social democracy. “Education lays foundation of good citizenship and is a principle instrument to awaken the child to intellectual and cultural pursuits and values in preparing the child for later professional training and helps him to adjust to new environment. Education therefore should be committed to the social, political or economic needs of our developing nations fostering secular values, breaking the barriers of casteism, linguism, religious bigotry and should act as an instrument of social change. Education kindles its flame for pursuit of excellence, enables and ennobles the young mind to sharpen his or her intellect more with reasoning than blind faith to reach intellectual heights and inculcate in him or her to strive for social equality and dignity of person. The International community places great emphasis on this right which is evident from the elaborate provision made in various international documents.”²

The International Covenant on Economic, Social and Cultural rights, makes it obligatory on the state parties to recognize the right of everyone to education,³ and states that primary education must be free and compulsory, secondary education be made generally available and accessible to all and higher education to be made equally accessible to all. The Convention on Rights of Child, 1989 makes a similar provision.⁴ Further the Convention on the protection of the Rights of All Migrant Workers and Members of their families, 1990, even though dealing with the migrants across border makes certain important contributions which are relevant for all the migrant workers. It states that ‘Each child of a migrant worker shall have the basic right of access to education on the basis of equality of treatment with nationals of the State concerned. Access to public pre-school educational institutions or schools shall not be refused limited by reason of the irregular situation with respect to stay or employment of either parent or by reason of the irregularity of the child's stay in the State of employment.’⁵ The Committee on migrant workers elaborate that States parties must provide free and compulsory primary education for all, including children of migrant workers, regardless of their migration status. As such, States parties have an obligation

*Assistant Professor, School of Indian Legal Thought, Mahatma Gandhi University, Kottayam, Kerala.

¹ (1991) 2 SCC 716, p.120

² See the various provisions in UDHR and ICESCR.

³ Article 13

⁴ Article 28

⁵ Article 30



(Re-accredited by NAAC with 'A' Grade)

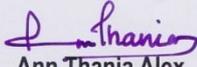
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UNIVERSITY OF KERALA

NATIONAL SEMINAR
ON
RIGHT TO HEALTH-VARYING DIMENSIONS

Certificate

This is to certify that *Dr. Sheeba Pillai, Associate Professor, School of Indian Legal Thought, Kottayam* has attended and / acted as resource person / chaired a session / presented a paper on *Marginalized Groups - Gender Minorities, Victims of Sexual offences, Persons with Disability* at the National Seminar on Right to Health - Varying dimensions held on the 14th and 15th, December 2016 at Seminar Hall, Department of Law, University of Kerala.


Ann Thania Alex
Co-ordinator




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Head, Department of Law &
Hon. Director, Dr. B.R. Ambedkar Chair,
(Centre for Human Rights and Social Justice.)

Thiruvananthapuram
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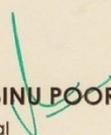
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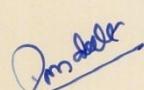


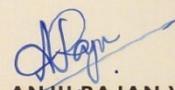
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/ presented a paper on _____*

*in the Two Day National Workshop on "VICTIMS OF SEXUAL VIOLENCE:
LEGISLATIVE AND JUDICIAL RESPONSES" organized by Dr. A.T.
Markose Chair on Advanced Legal Studies on **18th & 19th January, 2017** at
Government Law College, Thrissur.*


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Principal


Smt. PREMALATHA B.
Coordinator-ATMC


Dr. ANJU RAJAN V.
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Thrissur
19/01/2017





**SCHOOL OF LEGAL STUDIES,
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Three Day UGC - Sponsored National Seminar on
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 national seminar on “Protection of Migrant Workers in India : Legal and Social
 Concerns” held at School of Legal Studies, Cochin University of Science and Technology,
 Kochi-22, from 19-21 January, 2017. The title of the paper *Session 4:
 "Migration: An overview of criminogenic
 factors."*

Dr. P.S. Seema
Director

Dr. Vani Kesari A
Co-ordinator

Dr. Binu Mole K,
Co-ordinator

Date *20/01/17*
Kochi-22



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HEALTH OF ELDERLY – HOW IT DIFFERS?

Dr.Anand P.Ambali

Introduction

The elderly now constitute 8.2% of total population. As one grows old, diseases pertaining to specific age group surfaces. Non communicable and preventable diseases are more common in elderly which increases morbidity than mortality. Because of this most elderly have to compromise with quality of life. When acute diseases like pneumonia , falls and related injuries occur, there is sudden decrease in quality of life and they become dependent and few become bed ridden.

The disease pattern in elderly is peculiar. The diseases which has onset at age of 40years of age like hypertension, diabetes mellitus, ischemic heart disease, tuberculosis etc continue to stay as person grows old. To add to these diseases, another set of diseases that are peculiar in old age also appear like prostate enlargement, malignancies, stroke, osteoarthritis, parkinson's disease etc. So an elderly is a person with a blend of diseases, those which had origin before 60years of age and those after 60years. Despite so many problems in elderly, the fascinating thing about it is they accept it and learn to live with it happily. It's the acute conditions like fever, falls ,urinary tract infections, pneumonia , dehydration exaggerates the symptoms of chronic diseases and it also leads to surface the hidden diseases like abuse and depression in them.

The main goal in elderly shall be to maintain quality of life and near dependency till end.

Health scenario in India

We are all aware that population of India is also greying. At one end we are increasing life span by various means like reducing infant mortality rate, immunization, better health facilities and interestingly health care reaching even some rural areas.

At the other end, we are not prepared to face the biggest health challenge of the century ie the health care of elderly population.

The health system in India is already struggling and striving hard to take care of diseases in infants, pregnant women and children.

Non communicable diseases like diabetes mellitus, hypertension, obesity ,ischemic Heart Disease and stroke are commonly prevalent in adult population . Many people succumb to infectious diseases like

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RESEARCH PUBLICATIONS

BOOKS

- 1 K.M Seethi, *Engaging South Asia: Challenges and Opportunities of New Diplomacy* (e-book) (KPS Menon Chair 2017)
- 2 K.M Seethi, *Economic Empowerment and Livelihood Security: Engaging MGNREGS in Kerala* (KPSM Chair 2017).
- 3 Girish Kumar R (Ed.), *Globalisation and India's Innovation Systems: A Creative Destruction?*, Mahatma Gandhi University, Kottayam, 2017.
- 4 CP Chandrasekhar and Girish Kumar R (Ed.), *GST: Fiscal Federalism in Central Polity*, Mahatma Gandhi University, Kerala, India 2016.
- 5 C.Vinodan Ed.(2017), *India's Foreign Policy and Diplomacy: Emerging Scenario and Challenges*, New Century Publications, New Delhi, ISBN 978-81-7708-436-8
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14. "Building asset management in Local Governments: A study on selected Panchayats in Kerala", *KILA Journal of Local Governance*, (January-June) Vol-3, 2017. (Co-author: Relfi Paul).
15. Girish Kumar R, "Shakespeare as a Classical Realist: Reinterpreting Henry V", *Indian Journal of Politics and International Relations*, July-December, Vol.2, 2016.
16. Girish Kumar R, "Political Economy of access to Space Technologies: Positioning India" in *International Journal of South Asian Studies*, January-June, Vol.1, 2016. (Co-author Ramnath Reghunadan).

17. Girish Kumar R, "Shakespeare and Politics: Reinterpreting Classical Realism in King Richard II", *Indian Journal of Politics and International Relations*, January-June Vol.1, 2016.
18. Girish Kumar R, 'Land asset management in Local Governments: A study on selected Panchayats in Kerala', *KILA Journal of Local Governance*, (January-June) Vol-3, 2016. (Co-author: Relfi Paul).
19. C. Vinodan (Co- author) (2016), Human Rights Violations and Post-Saddam Iraq, *International Journal of Management and Social Science Research Review*, Vol.1, Issue.2. PP-198-203, ISSN -2349-6738, Impact Factor: 3.029
20. Lirar Pulikkalath, "The Oasis of Peace in the Troubled Region": Jordan's Quest for Stability in the Arab World", in Bensider Pradhan (ed) *West Asia in a Changing World* (forthcoming).
21. Lirar Pulikkalath, "The Indian Diaspora and Multidimensional Crises in the Arab World: A Study of the Trends in Kerala's Engagement with Gulf", in Rana Pratap Singh (ed) *Democratic Upsurge in West Asia: Global Concerns and Implications for India* (forthcoming)
22. Lirar Pulikkalath, "Options are there, but Obstacles too: the Future of Arab Refugees in Contemporary West Asia", in Sajad Ibrahim (ed), *Socio-Political Turmoil in West Asia*(forthcoming)

Conferences/ Seminars/ Programmes Organized by the School

1. On 9 January 2017 the School organized a programme to honour the alumni of the School. Two books written by Dr. M.S.Sreerekha, Assistant Professor, University of Virginia, USA and Dr. Rekha Raj, Programme Officer, Amnesty International, Bangalore were released. Dr.M.S.Sreerekha and Dr.Rekha Raj spoke about their respective books. (*State without Honour: Women Workers in India's Anganwadis., Dalit Sthree Idapedalukal*) Dr.B Ekbal, Member, Planning Board, Government of Kerala was present on the occasion. Also present was Dr.A.K.Ramakrishnan, Professor, Jawaharlal Nehru University, New Delhi.
2. The School on 10 January 2017 organised in connection with the Human Rights Association and the School of Letters, a lecture by Sri.Jijo Kuriakose, Founding Member, Queer Kerala, a lecture on Transgender Rights.
3. The School on 13 January 2017, in association with the C.H.Mohammed Koya Chair organised a lecture on "Perspectives of Globalisation and the Question of

Marginalisation” by Dr.N.Sebastian, Assistant Professor, School of Global Studies, University of Sikkim.

4. On 23 January 2017, the School organised two lectures in the forenoon and the afternoon. Dr. R.K.Jain, former Professor and Dean, School of Social Sciences, Jawaharlal Nehru University, New Delhi, spoke on Diaspora and Transnationalism: Methodological Concerns. Dr.Shobitha Jain, former Professor of the Indira Gandhi National Open University spoke on “My Approaches to Gender Concerns.”
5. The Centre of West Asian Studies of the School in association with the C.H.Mohammed Koya Chair organised a lecture by Dr.P.J.Vincent, Head, Department of History, Government Arts and Science College, Calicut (Currently Press Secretary to the Speaker, Kerala Legislative Assembly) on “Question of Palestine and the Changing World Order.”
6. On 17 February 2017, the School organised an Alumni Lecture. Dr.S.Shaji, Assistant Professor, Department of Political Science, University of Hyderabad, spoke on “Asian Involvement in Africa: Emerging Binaries in the Global South.”
7. The School on 22 February 2017, in association with the C.H.Mohammed Koya Chair organised a lecture on “Religion and Maritime Trade: A Historical Analysis of Kerala’s Engagement with West Asia” by Dr.Shelly Johny, Assistant Professor, St.Aloysius College, Elthuruthu.
8. The seven-day Indian Council for Social Science Research Workshop on Research Methodology conducted in collaboration with the School commenced on 27 February 2017. The Vice Chancellor Dr. Babu Sebastian inaugurated the Workshop. The participants included Research Scholars from the states of South India. The valedictory meeting was held on 4 March 2017. Dr.Channa Basaviah, Honorary Director, ICSSR, Southern Regional Centre, Hyderabad and Dr.Jacob Kalle, Consultant, ICSSR were present in the occasion.
9. Students of the two M.A batches began on 6 March 2017, a three day programme on “Budgeting” in collaboration with the Gulati Institute for Taxation Studies, Trivandrum. They also visited the Kerala Legislative Assembly.
10. On 15 March 2017 the School organised the inaugural lecture of the Rajiv Gandhi Chair for Public Policy Studies. Sri. Mani Shankar Aiyar, former Union Minister and currently Chairperson, South Asia Foundation, India Chapter delivered a lecture on

India – Pakistan Relations. Dr.Sheena Shukoor, Pro Vice Chancellor presided and Sri.K.Sharafudeen, Member, Syndicate, offered felicitations.

11. Dr.A.K.Ramakrishnan, Professor of West Asian Studies, School of International Studies, Jawaharlal Nehru University, New Delhi delivered two lectures on the 6th and 7th of June 2016. The titles of the topics were “Environment and Development” and “Feminism”, respectively.
12. Dr.Jacob John, Research Scholar addressed M.A students on “The Significance of Brexit.” on 12th July 2016.
13. A Special Lecture by Sukumar Muralidharan noted Journalist on “New Media and International Civil Society” was delivered
14. A talk on “Mahatma Gandhi and China” was delivered by Dr.Yinghong Huang, Associate Professor, Sun-Yat-Sen University,China on 11 August 2016.
15. A Colloquium on “Political Transformation in China and India was held on 18th August 2016. The resource persons included Sri.Muralidharan Nayar, Former Consul in Beijing, Dr.Chen Jinying, Associate Professor, Shanghai International Studies University, China and Dr.Yinghong Huang, Sun-Yat-Sen University, China.
16. The Nelson Mandela Memorial Lecture was held at 2.00 pm on Tuesday, 4 October 2016. Noted political scientist and academic Prof.Achin Vanaik spoke on *Nationalism: Its Power and Limits*.
17. The K.P.S Menon Memorial Lecture was held at 10.30 am on 5 October 2016. Prof.Boris Kagarlitsky, eminent social thinker and Director, Institute of Globalization and Social Movements (1950), Moscow delivered the lecture on *The Challenges of the Current Crisis for BRICS*.
18. On the 11th and 12th of November 2016 the School in association with the Institute for Contemporary Chinese Studies and the Indian Council for Social Science Research organized an International Conference on *India, China and the New Silk Road Initiatives: Challenges and Opportunities*. The venue of the conference was Hotel Indraprastha, Kottayam.
19. A team of Faculty members and M.A students from the Central University of Sikkim visited the School on 21 December 2016. Dr.A.M.Thomas and Dr.K.M.Seethi delivered lectures on the occasion which was later followed by an interaction between the team and the students of the School.

20. A lecture by Mr. Derck Verbakel, Researcher, at the Institute of Peace and Conflict Studies, New Delhi on “Between ISIS and Sisi: Unpacking Violence Against Egypt’s Copts” was organised on 8 May 2017.
21. The School in collaboration with the K.N.Raj Centre and the School of Environmental Sciences organised a three day Symposium on Pampa: Environment, Culture and Governance, from 19 to 21 May 2017. At the conclusion of the symposium a document titled “Pampa Declaration”, a seven point action plan for the conservation of the river was issued. The Director of the School, Dr.A.M.Thomas handed over the document to Dr. Babu Sebastian, Vice Chancellor at the function organised at Hotel Excalibur, Thellakom.

SCHOOL OF LETTERS

Publications and Annual Lectures

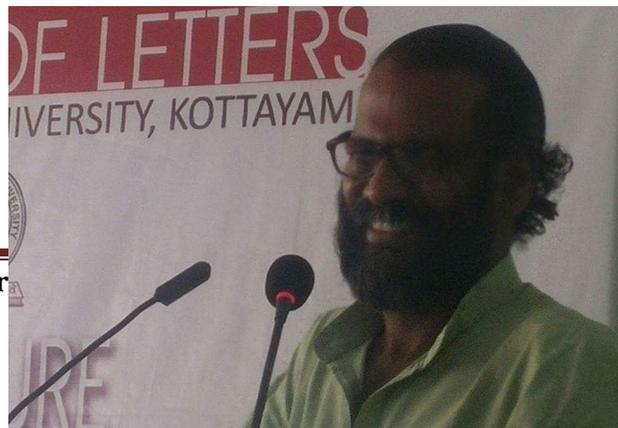
- **HARITHAM**, an interdisciplinary journal with a special thrust on translation.
 - *Kazhchayute Pakarnnattangal* (2012), a volume in honour of P Balachandran
 - **G Sankara Pillai Memorial Lecture and founders’ day programme on January 1**
 - **R Narendra Prasad Memorial Lecture**
 - **D Vinayachandran Memorial Lecture Series**
 - **‘Key Words’ Lecture series**
- ✓ **Mukkutti—Folk song festival was celebrated along with the celebration of the grand carnival of Kerala .Onappattu,Oonjal pattu,Bhakthi songs,Thumbi Thullal Songs ,Nadan songs etc.were sung with great enthusiasm and passion, a ,feast for folk song lovers.People from the length and breadth of the state**



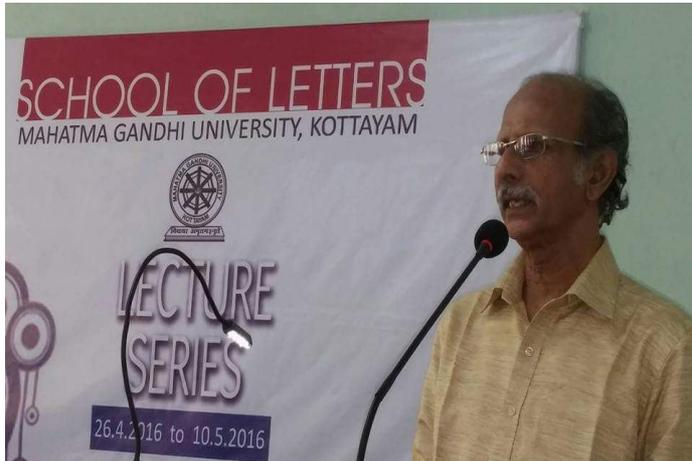
Extension Lectures

Dr. T B Venugopala Paniker,

Dr. J Devika, Dr. Sunil P Elayidom



Lectures by Dr. Chathanath Achyuthanunni, Dr. T V Madhu, Dr Hariprasad



- **‘Mukkutti’, an all Kerala Cultural Fest (August, 2016)**
- **‘Thirakkala’, an all Kerala Film Making Workshop (January, 2017)**

Seminar on Hebrew and Italian Renaissance led by Dr. Daniel Kokin



SCHOOL OF MANAGEMENT AND BUSINESS STUDIES

No. of faculty members involved in curriculum

Restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

1. Dr.E. Sulaiman , Dr Santhosh P Thampi, Dr Johney Johnson, Dr M K Biju participated, BBA and B.com syllabus Revision workshop conducted by the University of Kerala; MBA syllabus revision of SMBS, MG university; and Syllabus modernisation of MBA Programmes in Kerala conducted by the ASC, Govt of Kerala at KUFOS, Cochin
2. Biju MK, Johney Johnson, Santhosh P Thampi, Sajimon Abraham Attended the One-day Workshop on “NAAC Accreditation Process” held at School of Pure and Applied Physics conducted by IQAC of Mahatma Gandhi University, Kottayam on 12th April, 2016.

Initiatives undertaken towards faculty development

1. Dr.E. Sulaiman, Participated one day AICTE work shop for EVC members, on 6/3/17 at Mar Athanasius College of Engg. Ernakulam

2. Dr Johney Johnson, Participated 7 day work shop for teachers, at UGC HRDC, University of Kerala

Details on research publications

1. Sonia katherin Mathew & Johney Johnson, (2017), A study on the influence of attitudinal and environmental factors on Entrepreneurial Intention, *International Journal Of Research in COMMERCE, IT & MANAGEMENT*, Vol 7, pp 64-69
2. Biju B & Johney Johnson(2017), The Persuasive Effect of Green Advertisement: An Analytical Enquiry, *International Journal of Management and Social Sciences Research (IJMSSR)*, June 2017, Vol 6,pp. 36-49.
3. Johney Johnson & Radhika P C(2017), Structural Equation Modeling Of Perceived Impacts Of Tourism – A Study In Residents Perspective, *Abhigyan - Quest For Excellence*,
4. Sonia katherin Mathew & Johney Johnson, (2017), Entrepreneurial attitudes and their influence on the Entrepreneurial Intention, *Asian Journal Of Research In Business Economics And Management*, Vol 7, pp 261-274.
5. Johney Johnson & Radhika P C(2017), Structural equation modeling of role of government in sustainable developmentof tourism – a study in residents perspective, *Indian Journal of Commerce & Management Studies*, Vol. 8, pp. 100-106.
6. Johney Johnson & Radhika P C(2017), Ecotourism initiatives in Kerala- A study with special reference to Thekkady, *International Journal of Management and Social Science Research Review*, Vol. 1, pp. 157-162.
7. Johney Johnson & Radhika P C(2017), Developing Sustainable Development Strategies in Tourism Industry, *International Journal of Business and Administration Research Review*, Vol. 1,pp. 199-207.
8. Tijo Thomas and Johney Johnson (2017) The Role of Celebrity Attractiveness and Trustworthiness on Social Advertising Effectiveness , *KICMA Reach Journal of Management*, Vol.3 No.1, ISSN : 2395-0293. Pp. 23-31
9. Tijo Thomas and Johney Johnson (2016) The Impact of Celebrity Expertise on Advertising Effectiveness: The mediating role of Celebrity Brand Fit, *Vision – The Journal of Business Perspective*, eISSN: 22495304, ISSN: 09722629,
10. Tijo Thomas and Johney Johnson (2016) Effect of celebrity credibility on consumer intention for behavioural change: a study on celebrity endorsed social advertising, *IIM Journal of Marketing Science*, Vol. 7 Issue 2 ISSN (Print): 0976-030X,pp. 145-155

11. Tijo Thomas and Johny Johnson (2016) The Impact of Celebrity Trustworthiness on Advertising Effectiveness, *Management Researcher*, Vol. 22 Issue 3 ISSN: 2230 8431, pp. 285-292
12. Tijo Thomas and Johny Johnson (2016) Effect of Celebrity physical attractiveness on behavioural change intention: A study on celebrity endorsed social advertisement, *Rajagiri Management Journal*, Vol.10 Issue1 , ISSN: 0972-9968, pp63-78
13. C V Lolitha and Johny Johnson (2016) A Study on Dimensions of Employee Engagement, *Management Researcher*, Special Issue, VOL.XXII. No.3, Jan- Mar 2016, , ISSN:2230-8431,pp. 182-192
14. C V Lolitha and Johny Johnson (2016) A Study Linking Employee Engagement to Leadership Styles, *Annual Research Journal of Department of Management Studies Bengaluru IMEIB*, Vol.1, April 2016, ISSN 0254-8755,pp. 105-111
15. Nishad A, Sajimon Abraham, “Spatio Temporal Customer Analysis of Big data Generated from GPS traces of moving objects for personalized Customer Relationship Management”, *Rajagiri Management Journal*, ISBN: 9729968, December 2016
16. Deepa Mary Mathews, Sajimon Abraham, “Extraction and Evaluation of Patients’ Standpoints Pertaining to Ayurvedic Health Treatment”, *International Journal of Research in Engineering and Applied Sciences (IJREAS)*, ISSN(O): 2249-3905, ISSN(P) : 2349-6525 , May 2017
17. Saritha K, Sajimon Abraham, “Big Data Challenges and Issues: Review on Analytic Techniques”, *Indian Journal of Computer Science and Engineering (IJCSE)*, e-ISSN: 0976-5166, p-ISSN : 2231-3850, 2017 June.
18. Afsal E. M and T Mallikarjunappa(2017), Non-linear Dependencies in Gold and Stock Prices:
A Multivariate Analysis, *AIMS International Journal of Management*, 11(1) January 2017, ISSN:1939-7011 pp. 21-34.
19. E.M. Afsal and Mohammad Imdadul Haque (2016), Market Interactions in Gold and Stock Markets: Evidences from Saudi Arabia, *International Journal of Economics and Financial Issues*, ISSN: 2146-4138,

20. Dr.E. Sulaiman and Uvais, Influence of Service Quality on Customer Patronage Intensions in Commercial Banks: An Empirical Evidence. IOSR Journal of Business and Management, Vol.19 (6), June 2017, ISSN 2319-7668, pp 62-66.
21. Dr.E. sulaiman and Sajith I.V. Crisis of Handloom Units in Kerala and Tamil Nadu: An Empirical Study on the Problems and Challenges, *Journal of Rural and Industrial Development*, Vol. 5(1), April 2017, ISSN: 2321-1873, pp 23-34.
22. Dr.E. Sulaiman. "Role of GST for Ease of Doing Business in India", *Amity Journal of Management*, Vol. 4(2), 2016, ISSN 2347-1832, pp. 8-17.
23. Dr.E. Sulaiman and Baisal Johon Thomas, "Fund Preference of Mutual Fund Investors" *Research-Bulletin: ICWAI*, Vol 42, No. 1, April 2016, ISSN 2230-9241, pp 107-117.

Conference Proceedings

1. Tijo Thomas and Johney Johnson (2017) "Impact of Celebrity Trustworthiness on Purchase Intention: Mediating role of Celebrity Brand Fit" (2017) proceedings of 7th IIMA conference on Marketing in Emerging Economies, ISBN: 978-81-920800-6-2, pp. 09-214
2. Tijo Thomas and Johney Johnson (2017) "What is beautiful is good': Impact of Celebrity Attractiveness on Advertising Effectiveness" (2017) Reaching Consumers of Emerging Markets, Proceedings of the 2017 Annual Conference of the Emerging Markets Conference Board, ISBN: 978-81-928560-2-5, pp. 164
3. Tijo Thomas and Johney Johnson (2016) "Effect of Celebrity Endorser on Endorsement Recall" Proceedings of Conference on Brand Management (CBM-2016), ISBN 978-1-78635-411-2, pp. 97
4. Tijo Thomas and Johney Johnson (2016) "Celebrity Endorsed Public Service Advertisement: A Literature Review" Conference Proceedings of National Conference on Business Models, 2016, ISBN 978-93-5258-523-6. Pp. 191-196

5. C V Lolitha and Johney Johnson (2016) “Employee Engagement : New Concept to Manage Workforce” Conference Proceedings of National Conference on Business Models, 2016, ISBN 978-93-5258-523-6.
6. C V Lolitha and Johney Johnson (2016) “Employee Engagement : A Comparative Study Among Service Sector Employees in Kerala” Conference Proceedings of One Day National Conference on Changing Role of HRM- The Strategic Opportunities and Challenges, ISBN 978-81- 920992-7- 9 pp. 127- 136
7. C V Lolitha and Johney Johnson (2016) “Employee Engagement: A Glimpse of IT Sector in Kerala” Human Capital Employability and Competency Building, ISBN:978-93-85777- 92-9 pp. 183-189
8. C V Lolitha and Johney Johnson (2016) “Employee Engagement among Service Sector: An Indian Perspective” Proceedings of the 3rd International HR Conference-2016, Vol.3.No.1, ISBN:978-81- 929777-2- 0 pp. 127- 136
9. Nishad A, Sajimon Abraham, “Semantic Trajectory Analysis for Identifying Locations of Interest of Moving Objects”, IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20- 22, 2017
10. Nishad A, Sajimon Abraham, “Spatio Temporal Tracking an augmented tool for Supply Chain Management”, International conference on Best Practices in Supply Chain Management, December 22-23, 2016
11. Deepa Mary Mathews, Sajimon Abraham, “Sexual Category Feature Extraction of Sentiments about Ayurvedic Health Treatment”, International Conference on Current Trends in Engineering, Science and Technology ICCTEST – 2017, ISBN: 978-81-931119-5-6, JAN 5-7, 2017
12. Deepa Mary Mathews, Sajimon Abraham, “Analytic Thinking of Patients’ Viewpoints Pertain to Spa Treatment”, IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20-22, 2017
13. Saritha K, Sajimon Abraham, “Big Data Challenges in Supply Chain: Review on Analysis Techniques Using Statistical Methods and Machine Learning”, International conference on Best Practices in Supply Chain Management, December 22-23, 2016

14. Saritha K, Sajimon Abraham, "Prediction with Partitioning: Big Data Analytics Using Regression Techniques", IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20-22 2017.
15. Benymol Jose, Sajimon Abraham, "Some unstructured Data Mining Methods to Mine Knowledge from Supply Chain Data:A NoSQL perspective", International conference on Best Practices in Supply Chain Management, December 22-23,2016
16. Benymol Jose, Sajimon Abraham, "Some Big Data Analytics Methods to Mine Knowledge from Supply Chain Data", International Conference on Science, Engineering, Technology and Management, March 8-9,2017
17. Benymol Jose, Sajimon Abraham, "Exploring the merits of NoSQL: A study Based on MongoDB", IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July20-22,2017
18. Lumy Joseph, Sajimon Abraham, "Role of Algorithms in Computer Technology", E-learning Instructional Designs for Short Learning Objects, ISBN 978-93-80419-29-9, January 16-30, 2017
19. Lumy Joseph, Sajimon Abraham, "Instructional Design for Learning Path Identification in an E-learning Environment using Felder-Silverman Learning Styles Model", IEEE conference Proceedings of the International conference on Networks and Advances in Computational technologies-NetAct17, ISBN 978-1-5090-6590-5, July 20-22,2017
20. Lumy Joseph, Sajimon Abraham, "Web- Based Psychometric Testing Tool for Identifying Patient's Genetic Variations in Health-Care Management", 29th Kerala Science Congress, ISBN 81-86366-93-98, January 28-30, 2017
21. Rajesh N, Sajimon Abraham," Privacy preserved approach for Trajectory Anonymization through Zone creation for halting points", IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July20-22,2017
22. Mathew, G. A., & Zacharias, S. (2016). A Study on Employee Benefits from Training an Organizational Commitment of employees of select star classified Hotels in Kerala, International Conference on HRD,DDU **Kaushal Kendra, CUSAT**, *September 01,2016*
23. Sebastian, R. T., & Zacharias, S. (2016). The magic of Mentoring: Learning and Career

- outcomes of New Generation Private Sector Bank Employees in Kerala, *International Conference on HRD, DDU Kaushal Kendra, CUSAT, September, 2016*
24. Mathew, G. A., & Zacharias, S. (2016). A Conceptual Overview on Relationship between Employee Attitude towards Training and Organizational Commitment. *Third International HR Conference, Sri Jayawardenpura university, Department of Human Resource Management, Colombo, October, 2016.*
 25. Sebastian, R. T., & Zacharias, S. (2016). Mentoring in select Commercial Banks in Kerala. *Third International HR Conference, Sri Jayawardenpura university, Department of Human Resource Management, Colombo. October, 2016*
 26. Joice, Jominy, & Zacharias, S. (2016). How Individuals construct their career stories? conceptual review on Career Self Management Behaviors". *Third International HR Conference, Sri Jayawardenpura university, Department of Human Resource Management, Colombo, October, 2016*
 27. George, Brijesh, & Zacharias, S. (2016). Internet Shopping Behaviour of Kerala Consumers, *International conference on Marketing, Technology and Society, Indian Institute of Management, Kozhikode(IIMK), Kozhikode , September , 2016*
 28. John, J., & Zacharias, S., (2016) Banking on Celebrity's 'Girl Next Door Image': Case of 'Kalyan Jewellers'. *International Conference on Marketing, Technology and Society Indian Institute of Management Kozhikode, September 29, 2016*
 29. Mathew, G. A., & Zacharias, S. (2017). The Concept of Organizational Commitment – A Study among star classified hotel employees in Kerala, *National Conference on Emerging trends in Management and Entrepreneurship, IMK, University of Kerala, March 17, 2017*
 30. Sebastian, R. T., & Zacharias, S. (2017). Mentoring and Career Outcomes – A Study among Selected Commercial Bank Employees in Kerala, *National Conference on Emerging trends in Management and Entrepreneurship, IMK, University of Kerala, March 17, 2017*
 31. Joice, Jominy, & Zacharias, S. (2017). Career Self Management Behaviours and Career Satisfaction – A Study Among IT Professionals in Kerala, *National Conference on Emerging trends in Management and Entrepreneurship, IMK, University of Kerala, March 17, 2017*
 32. Sreedhar, Deepthy, & Zacharias, S. (2017). Need for Competency Mapping in Public Sector Enterprises of Kerala, *National Conference on Emerging trends in Management and Entrepreneurship, IMK, University of Kerala, March 17, 2017*

33. Joice, .Jominy, & Zacharias, S. (2017). New Paradigms in IT Careers: Empirical Examination on Career Orientations and Career Strategies among IT Professionals in Kerala, Emerging Paradigms in Business-HR and Marketing Perspective:
34. Dr.E.Sul;iman and Uvais,“Customer Satisfaction in Commercial Banks: Exploring the Symmetrical Impact of Demographic Variables to the Patronage Intentions” Joint paper by Uvais, and Sulaiman, National Conference on New Paradigms in Business and Management, Organized by School of Management Studies, Cochin University of Science and Technology, April 20-21, 2017.
35. Dr.E. Sulaiman and Baisal Johon Thomas, “Factors Influencing Retails Investors in the selection of Mutual Fund Products: An Empirical Evidence from Indian Capital Market” 7th International Conference on Excellence in Research and Education, Organized by IIM, Indoor, 5-8th May 20016.
- 36. Biju MK, “A Study on the ExpectedCompound Annual Growth Rate of Indian Organic Food Industry in Comparison with Global Organic Food Industry”**
37. Presented at the International Conference on Science, Technology and Management (ICSETM – 2017) on March 8th& 9th, 2017 by the Post Graduate Department of Mathematics at Kuriakose Elias College, Mannanam, Kottayam
“Channelizing CSR Activities towards Meaningful Social Sector Reforms”
38. Presented at the National Conference on Business Innovations and Management Practices on April 21st, 2016 by the Department of Management Science at M. E. S. College of Engineering, Kuttippuram, Kerala

SCHOOL OF PEDAGOGICAL SCIENCES

List of Teaching Faculty

Sl. No.	Name	Designation
1	Dr. Jaya Jaise	Professor
2	Dr. T.V. Thulasidharan	Professor
3	Dr. Minikutty A.	Professor
4	Dr. Sajna jaleel	Assistant Professor

List of External Experts

Sl. No.	Name and Address of Expert
1	Dr. K.R. Sivadasan, Professor & Dean (Rtd), Dept. of Education, University of Kerala TC7/213(17),23. Harithagiri, Kanjirampara, Thirvananthapuram 695030
2	Dr. M.A. Sudhir, Professor & Dean (Rtd), Dept. of Applied Research, Gandhigram Rural University, Madurai, Tamilnadu
3	Dr. H. Sam Sadananda Raj, Professor (Rtd), Dept. of Psychology, University of Kerala
4	Dr. S. Raju, Professor, Dept. of Psychology, University of Kerala
5	Dr. J. Jaser, Associate Professor, Dept. of Psychology, University of Kerala
6	Dr. Sreekala, Associate Professor, Dept. of Philosophy, Sanskrit University, Kalady

List of Publications in Journals:

1. **Laya A.B. and Thulasidharan T.V. (2016).** “Accessibility of student teachers to the facilities provided for multimedia production and presentation in teacher education programme”, ,**International Journal of Applied Research**, Vol.2,Issue 4, 2016,ISSN : 2394-5869 (online), Impact Factor : 5.2 (ISRA) PP.634-639.

2. **Shyja N.C. and Thulasidharan T.V. (2017).** “Significance of Health Education among Adolescent girls”. **Quest Journals, Journal of Research in Humanities and Social Science**, Vol.5, Issue 3, ISSN 3, ISSN; 2321 – 9467. Impact Factor : 5.00) PP. 43-46

List of Papers Presented

1. **“Personal Competence of student teachers at secondary level”** in the **International Conference** on a Sustainable Growth Innovation & Revolution in the new Millennium, organized by RDA & RDRF, Jaipur in collaboration with Rajasthan Chamber of Commerce and Industry, Jaipur on 7th & 8th November 2016.
2. **“Successful Ageing : A Psycho-Theoretical Outlook”** in the **International Seminar** on Successful Ageing’ organized by Marian College, Kuttikkanam from 27-28 December 2016.
3. **“SKIT – A Sketch on skill development among Adolescents:”** in the **National Seminar** on “behavior Modification : A Psychodynamic Approach to maladjustment in adolescents” organized by St. Thomas Training College of Teacher Education, Pala on January 2017.
4. **“Enhancing civic competence among youth : Need of the hour”.** In the **International Conference** on “Education at crossroads : Tilting Social Equations” organized by St. Thomas Training College, Nagarcoil from 2nd – 4th February 2017.
5. **“Stimulate Pro-Environmental behavior- An Influential Agenda for Primary Students”.** In the **International Conference** on “Education at crossroads : Tilting Social Equations” organized by St. Thomas Training College, Nagarcoil from 2nd – 4th February 2017.
6. **“Effectiveness of inductive Thinking Model in the achievement of Chemistry among Secondary school students”.** In the **International Conference** on Innovations in Research and Pedagogy on 3rd & 4th march 2017 organized by CTE.
7. **“Righteousness of the Children’s Rights : A Developmental Measure for Democracy”.** In the **International Conference** on Innovations in Research and Pedagogy on 3rd & 4th March 2017 organized by CTE.
8. **Inclusive Curriculum-An Overview.** In the **International Seminar** Mission 2030 Priorities, Barriers & Directions of Education, organized by Mother Teresa Collge of Teacher Education in collaboration with CTE, South zone Common Wealth

Council for Educational Admission of Management (exam) Kerala chapter as 22nd & 23rd May 2017

9. “Women entrepreneurship: A leading catalyst in social transformation “ in the International Seminar on Women entrepreneurship organized by NSS Training College, Panthalam on 22nd and 23rd June 2017.

List of Workshops/Seminar Participate

1. “International Conference on understanding contemporary India” held on 14-15 January 2016 at Mahatma Gandhi University organized by Rajiv Gandhi Chair for Public Policy studies in Kerala State Higher Education Council.
2. One day workshop on NAAC Accreditation Process held at School of Pure and Applied Physics conducted by IQAC of Mahatma Gandhi University on 12th April 2016.
3. Two days National Workshop on Transition of Particularly Vulnerable Tribal groups (Primitive) in India: An Ethno-Historical Relook’ held on 20th and 21st October 2016 at University of Mysore, organized by Centre for study of Social exclusion and inclusive policy (CSSEIP) Mysuru -Karnataka.

Dr Minikutty .A (Professor)

1. Constructivist Learning Design: An Effective Strategy for Enhancing Metacognitive Skills of Primary School Students. Research Tracks Vol .3 ,No 1, January 2016,(ISS 2347-4637, Impact Factor:.711(ISRA).
2. Generative Learning Model: An Effective Model for Developing Science Process Skills of Primary School Children. Santhom Journal of Edu Race Vol 1,Issue 1 ,February 2016,ISSN No.2455-6947
3. Economic Sustainability in Digital Era: A Study of among members of Kudumbasree Kerala State. Emerging Management and Technology for Economic Sustainability(2017),Shareif,Tet.al.(Eds).Chennai:ANURAGAM.ISBN:978-5228-080-3

Dr.Sajna Jaleel, Assistant Professor

Presentations in conferences and symposiums

Faculty Development Programme

1. Participated in the Two Week Capacity building workshop on E-learning and E-Content Development, Organized by the College Development Council, Mahatma Gandhi University from 16-01-2017 to 30-01-2017 and got grade A

2017

International Seminar/Conferences

1. A Study on the Environmental Awareness of upper primary school students of Kerala (2017).Paper presented in International Seminar and 15th Annual convention of Council for teacher Education, Kerala State Centre'Education at Crossroads: Tilting Social Equations', Organized by St.Thomas Training College, Thiruvananthapuram in Collaboration with State resource centre Kerala, CCEAM, AIRIO and WIFE. , Thiruvananthapuram , on Feb 2-4 ,2017.
2. Yoga-A booster to the creativity of Students (2016).Paper presented in the International Conference on Enhancement of creativity in Learning: Applications of innovative Pedagogy, Organized by Immanuel Arasar College of Education, Nattalam, Marthandam , on (9th and 10th March 2017.
3. Positive Thinking: A way of Life . (2017).Paper presented in UGC sponsored National Seminar on Behaviour Modification:A psychodynamic approach to Maladjustments in Adolescents, Organized by St.Thomas College of Teacher Education, Pala in Collaboration with AIRIO, on 19and 20th Jan 2017.
4. 21st Century Skills: Tha need of the Century.(2017). paper presented in National Seminar on Quality Research in Education: Towards a Coherent Understanding organised by Research Centre of Education NSS Training College, Pandalam on 4&5 July 2017

Details of Research Publications(with Impact factor)

Journals

2016

1. Jaleel, S. and Alie Molly verghis. (2017). Comparison between emotional intelligence and aggression among teacher trainees at secondary level. Universal Journal of Educational Research, 5(1): 137-140, 2017 DOI: 10.13189/ujer.2017.050117.
Impact Factor: 5.00
2. Jaleel, S. and Anuroofa, O.S.(2017). A Study on Secondary School students' Perceptives on Self Directed Learning.International Journal of Applied Research. Vol 03, 1, pp 262-266 Online ISSN No.2394-5869.
Impact Factor:5.2
3. Jaleel, S. and Sherly Philip (2017). A study on the Relationship between Affective Learning outcome and achievement in Physics of Secondary School Students. Journal of Research in Humanities and Social Science(Quest Journals).Vol.5. 1.pp 108- 111 ISSN No.2321-9457.Impact Factor
4. Jaleel, S. and Premachandran P. (2017). A study on the relationship between Scientific reasoning and Achievement in Chemistry of Secondary school Students. Journal of Research in Humanities and Social Science(Quest Journals).Vol.5. 2 Pp 4-8.ISSN No.2321-9457.Impact Factor
5. Jaleel, S. and Sherly Philip (2017). A study on the Relationship between Scientific Attitude and Achievement in Physics of Secondary School Students. International Education and Research Journal.Vol.3 Issue 2 E-ISSN No.2454-9916. Impact facto 4.064

Conference proceedings

1. Jaleel, S. and Jyothi, K.R.(2017). Positive Thinking: A way of Life. In the Conference Proceedings of UGC sponsored National Seminar on Behaviour Modification:A psychodynamic approach to Maladjustments in Adolescents,

Organized by St.Thomas College of Teacher Education, Pala in Collaboration with AIRIO pp75-78. Pala: St. Thomas College of Teacher education.ISBN:978-81-927201-5-9

No of books published

1. E-Learning Instructional Designs for Short Learning Objects(2017)(As Associate Editor),Mahatma Gandhi University:Department of Printing and Publishing.

Chapters in Edited book

2. Instructional Designs in Teaching -Learning Process with Special Reference to ADDIE Model and ASSURE Model. In Vijayakumar,R.,Abraham,S and Jaleel,S(Ed.)(2017)E-Learning Instructional Designs for Short Learning Objects(2017)(As Associate Editor),Mahatma Gandhi University:Department of Printing and Publishing.

Criterion 3.10:Number of conferences organized:

1. Served as Co-ordinator of the Two Week Capacity building workshop on E-learning and E-Content Development, Organized by the College Development Council, Mahatma Gandhi University from 16-01-2017 to 30-01-2017at School of Computer Sciences, Mahatma Gandhi University.
2. Served as Co-ordinator/ organizer in the International Seminar on School of Pedagogical Sciences, Mahatma Gandhi University held at School of Pedagogical Sciences Auditorium on 5th July 2017

Criterion 3.12:No of faculty served as experts, chair persons, resource person

Served as Resource Person for a three day Induction Training Program for Faculty on Python-Effective Teaching Methods on 19th July 2017 on the Topic Effective Teaching Methods organized by Department of IT and College of Engineering,Kidangoor

Details of collaborations

EDITORIAL BOARD MEMBER

Universal Journal of educational Research .Horizon research Publishing Co operation from 2014 onwards www.hrpub.org>jour_editorialboard

Details of research awards/recognitions received by the faculty and research fellows

- Serving as PG Board and UG Board(Education) member of Mahatma Gandhi University
- Two senior research fellow submitted Synopsis for the award of Ph. D degree in Education under my guidance and supervision
- One Research fellow was awarded Ph. D degree in Education under my guidance and supervision

SCHOOL OF PURE AND APPLIED PHYSICS

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International Level	National Level	State Level
Attended	39	19	3
Presented	44	13	1
Resource Persons			

1. D.Rithesh Raj, C.Sudarsanakumar, Surface Plasmon Resonance based fiber optic dopamine sensor using BSA-gold nano-cluster/Polymer composite, International Conference on Nanoscience and Nanotechnology, VIT University (ICNAN-2016).
2. D.Rithesh Raj, C.Sudarsanakumar, Optical fiber sensors for applications, National Seminar on Advances in Scientific and Industrial Instrumentation (ASCI-2017), Department of Instrumentation, CUSAT.

3. D.Rithesh Raj, S.Prasanth, C.Sudarsanakumar, Nonlinear optical properties of bio-synthesized gold nanoparticles, National Laser Symposium (NLS-25),KIIT University, Bhubaneswar.
4. K.V. Cinumon , S.Prasanth ,D. Rithesh Raj ,T.V. Vineeshkumar ,V. Mahadevan Pillai , C.Sudarsanakumar , Optical nonlinearities of iron doped zinc sulphide quantum dots. 61st DAE solid state physics Symposium, KIIT University, Bhubaneswar.
5. S.Prasanth, C.Sudarsanakumar, ZnS quantum dots an efficient candidate for the controlled release of anti-cancer drug. International conference on Advances in biological systems and materials science in nanoworld (ABSMSNW-2017), Department of physics, IIT, Banaras Hindu University, Varanasi.
6. S.Prasanth, C.Sudarsanakumar, Magnetic nanoparticles in biological medium, International meeting on Highly Correlated Systems (IMHCS-2017), School of Pure and Applied Physics and IIUCNN, mahatma Gandhi University.
7. Chinnu V. Devan, C.Sudarsanakumar, Interaction between Naringenin capped Silver nanoparticles and Human Serum Albumin, International meeting on Highly Correlated Systems (IMHCS-2017), School of Pure and Applied Physics and IIUCNN, mahatma Gandhi University. (Second Prize)
8. Monu Joy, Annie Mathews, C.Sudarsanakumar, Structural flexibility of multifunctional 2-Pyridone derivative in a crystal engineering perspective.International meeting on Highly Correlated Systems (IMHCS-2017), School of Pure and Applied Physics and IIUCNN, mahatma Gandhi University.
9. T.V. Vineeshkumar, C.Sudarsanakumar, Structural, Optical and Photocatalytic study of PEG capped Mg doped ZnS nanoparticles, International conference on New trends in Applied Chemistry (NTAC-2017), Sacred Heart College, Kochi.
10. P. Aparna, P. Haris, Mary Varughese, Mathew K Varghese, C.Sudarsanakumar, Structure and Dynamics of base modified DNA sequence,International conference on New trends in Applied Chemistry (NTAC-2017), Sacred Heart College, Kochi.

11. Riju K.Thomas, C.Sudarsanakumar, Interaction of Hesperetin capped gold nanoparticle with ct-DNA: Spectroscopic and Calorimetric studies. International conference on New trends in Applied Chemistry (NTAC-2017), Sacred Heart College, Kochi.
12. Riju K.Thomas, C.Sudarsanakumar, Calorimetric and spectroscopic study: The interaction of L-cysteine functionalized selenium nanoparticles with calf thymus DNA 1st INTERNATIONAL CONFERENCE ON NANOSCIENCE AND NANOTECHNOLOGY (ICNAN`16) , VIT, Vellore, Tamilnadu.
13. Riju K.Thomas, C.Sudarsanakumar , Interaction of quinoline alkaloid capped gold nanoparticles with ct-DNA using calorimetric and spectroscopic methods., International conference on advances in biological systems and materials science in nanoworld (ABSMSNW-2017) ,February, 2017, IIT BHU, Varanasi, Uttar Pradesh.
14. Riju K.Thomas, C.Sudarsanakumar , Interaction of alkaloid capped gold nanoparticles with ct-DNA using calorimetric and spectroscopic methods International meeting on highly correlated system (imhcs-2017), IIUCNN, MG University, Kottayam, March 2017
15. Riju K.Thomas, C.Sudarsanakumar , Interaction of flavone diosmine with ct-DNA using calorimetric and spectroscopic studies, International conference on advances in biotechnology and biotherapeutics (ICABBS- 2017), Sathyabhama University, Tamilnadu, March 2017.
16. Mary Varughese, Haris P, Mathew K Varghese, Aparna P, and Sudarsanakumar C. Molecular Recognition of the Flavanoid Luteolin with Duplex DNA. P-136, International Conference on Science, Engineering Technology & Management (ICSETM–2017) K. E. College, Mannanam.
17. P. Aparna, Mary Varughese, C.Sudarsanakumar, Structural studies of ydna duplexes elucidated through Molecular dynamic methods, International meeting on Highly Correlated Systems (IMHCS-2017), School of Pure and Applied Physics and IIUCNN, mahatma Gandhi University.

18. SKA 2016 Poster "*Using Maser Spots as Diagnostic for the IMF*" November 2016 Goa by K Indulekha
19. International Seminar on Globalization and India's Innovation System: A Creative Destruction? Feb 2017 by K Indulekha
20. International Meeting on Highly Correlated Systems SPAP MGU March 2017 by K Indulekha
21. Kerala Astronomers' Meet Calicut University and IRC Kochi July 2016 by K Indulekha
22. Star & Planet Formation Meeting IIST Thiruvananthapuram December 2016 by K Indulekha
23. Astronomical Society of India Annual Meeting at Jaipur March 2017 by K Indulekha
24. National Seminar on Natural Resources Management for Horticultural Crops under Climate Change CWRDM Kozhikode March 2017 by K Indulekha
25. SKA 2016 Poster "*Using Maser Spots as Diagnostic for the IMF*" November 2016 Goa by K Indulekha
26. Plenary Lecture on "*Non-Universality of the Initial Mass Function and Small Variations in the Kennicutt Schmidt Law / A&A @ SPAP*" International Meeting on Highly Correlated Systems SPAP MGU March 2017 by K Indulekha
27. Oral presentation "*Environment Dependence of Massive Star Formation and its Influence on our Inferences Regarding Star Formation*" Star & Planet Formation Meeting IIST Thiruvananthapuram December 2016 by K Indulekha
28. Poster presentation -Kerala Science Congress "*Effects of changes in the run down mass of the IMF on estimates of the SFR*" Remya T C Arundhathy V J, Babitha George Anu Babu Indulekha Kavila Jan 2017 by K Indulekha
29. Poster Presentation "*IMF variations and small variations in the fundamental relations*" Astronomical Society of India Annual Meeting at Jaipur March 2017 by K Indulekha
30. "*An Exploration of the Possibility of Bootstraps between Physical Processes in an Ecosystem, due to some of the Inter-relationships between Soil, Water, Plants, Animals and Climate*" National Seminar on Natural Resources Management for Horticultural Crops under Climate Change CWRDM Kozhikode by K Indulekha March 2017
31. Remya Mohan P, Subash Gopi, Viji Vidyadharan, Sreeja E, Saritha K Jose, Cyriac Joseph, P. R Biju*, Judd- Ofelt analysis and Photoluminescence studies of $\text{CaB}_2\text{O}_4:\text{Er}^{3+}$, Li^+ phosphor National Photonics Symposium and Annual Workshop

- (NPSAW 2016) 26-28 Feb 2016, International school of Photonics (ISP), Cochin University of Science and Technology, Cochin. 2016
32. Remya Mohan P, Viji Vidyadharan, N. V. Unnikrishnan, Cyriac Joseph, P. R. Biju* Synthesis and photoluminescence properties of $\text{CaB}_2\text{O}_4:\text{Er}^{3+}$, Li^+ phosphor for solid-state lighting applications International meeting on highly correlated systems, IMHCS 2017, 24-26 march 2017, School of Pure & Applied Physics, Mahatma Gandhi University, Kottayam. 2017
 33. Saritha K. Jose, Anns George, N. V. Unnikrishnan , P. R. Biju*, International meeting on highly correlated systems, IMHCS 2017, 24-26 march 2017, School of Pure & Applied Physics, Mahatma Gandhi University, Kottayam. Host Sensitized Emission and Judd-Ofelt Analysis of Pr^{3+} Ions in Sol-gel Derived ZrO_2/PEG Composite, 2017
 34. Remya Mohan P., Anns George, Saritha K. Jose, N. V. Unnikrishnan, Cyriac Joseph, P. R. Biju* Spectroscopic investigation of near white light emitting $\text{LaNbO}_4:\text{Dy}^{3+}$ phosphor International Symposium on New trends in Applied Chemistry (NTAC-2017), 9-11 February 2017, Sacred Heart College, Thevara, Kochi 2017
 35. Saritha K Jose, SubashGopi, Sreeja E, Remya Mohan P, N. V. Unnikrishnan, P. R. Biju*, Photoluminescence Characteristics and Judd-Ofelt Analysis of $\text{Pr}^{3+}:\text{ZrO}_2/\text{PEG}$ Composites International Symposium on New trends in Applied Chemistry (NTAC-2017), 9-11 February 2017, Sacred Heart College, Thevara, Kochi 2017
 36. Photoluminescence studies of CePO_4 nanocrystals synthesized by sol-gel method and its morphological dependence on acid concentration S Sisira, G Vimal, K P Mani, P R Biju, N V Unnikrishnan, C Joseph COCHIN NANO- February 2016.
 37. Photoluminescence properties of hexagonal and monoclinic $\text{CePO}_4:\text{Tb}$ nanocrystals: A correlation with microstructural properties S Sisira, C Joseph IMHCS 24-26 March 2017
 38. Synthesis and Morphological Analysis of cerium molybdate nanocrystals Kukku Thomas, Cyriac Joseph IMHCS 24-26 March 2017
 39. Synthesis and photoluminescence properties of green emitting terbium oxalate decahydrate nanocrystals Dinu Alexander , Cyriac Joseph IMHCS 24-26 March 2017
 40. Synthesis and characterization of europium doped yttrium oxalate single crystals Riya Sebastian, Cyriac Joseph IMHCS 24-26 March 2017
 41. Photoluminescence properties of monoclinic structured $\text{CePO}_4:\text{Tb}^{3+}/\text{Dy}^{3+}$ green and blue nanophosphors for white LED applications Sisira S, Cyriac Joseph

42. National seminar on 'frontiers of Nanotechnology'-08-09 August 2017, Depart of Physics, Marthoma College for Women, Perumbavoor

Conference Proceedings by Nandakumar Kalarikkal

43. Invited lecture on 'Advanced Nanomaterials for Energy Applications', at International Conference on Energy Harvesting Storage and Conversion (IC-EEE 2015), during 4-7 Feb 2015, at Cochin.
44. Fourth International Conference on Natural Polymers (ICNP 2015) : 10-12 April 2015
45. INUP Familiarization Workshop on "Nanofabrication Technologies" during 18-20 May,2015 at IISc Bangalore
46. International Conference on Recent Innovations in Tissue Engineering on 9th October 2015
47. National Seminar on Advanced Materials during 29-30 October 2015
48. World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences
49. International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015) on 13, 14 and 15 November 2015
50. Deakin India Research Initiative- Symposium-2015 during December 6-9, at *The Energy and Resources Institute*, Delhi
51. First International Conference on Advanced Materials for Power Engineering , 11-13 December 2015
52. Three Days Lecture in 'Key Parameters in Science Park Management' held in Iran from December 18-20, 2015
53. Invited talk in International Conference on "Advances in Applied Mathematics, Materials Science and Nanotechnology for Engineering and Industrial Applications (IC-AMMN-2016), during 7-9 January, 2016, at FISAT, Angamaly, Kerala
54. National Seminar on "Frontiers of Materials Science (NASFOMS 2016) during 24-15 February, 2016 at Calicut, Kerala
55. Workshop on Nanotechnology Perspective in Homoeopathy- Characterization of Homoeopathic Drugs" on 10th March, 2016, at NIT Calicut, Kerala
56. Invited talk on "Advanced Nanostructured Materials and Applications" at International Conference on Materials Research and Applications (ICMRA 2016) during 11-13 March, at CMR Technical Campus, Hyderabad
57. International conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Applications (ICM-2016) 13-15 May 2016

58. Fourth International Conference on Nanomedicine and Tissue Engineering (ICNT 2016) 12-14 August 2016
59. Invited talk at National Conference on “Study of Matter using Intense Radiation Sources and Under Extreme Conditions”, during 03-06 November, 2016, at UGC-DAE Consortium for Scientific Research, Indore
60. Second International Conference Advanced Materials for Power Engineering (ICAMPE 2016) 11-13 November 2016.
61. Fourth International Conference on Polymer Processing and Characterization (ICPPC 2016) 9-11 December 2016
62. Invited talk at Researcher Links Workshop on “Nano-Biomaterials for Water Purification” during 12-16 December, 2016, at Mahatma Gandhi University, Kottayam, Kerala
63. Ion-Acoustic Double Layers in a Five Component Cometary Plasma with Kappa Described Electrons and Ions **Manesh Michael** , Sijo Sebastian , Sreekala G. , Neethu Theresa Willington and Chandu Venugopal
National Space Science Symposium (NSSS - 2016), 9 – 12 February, VSSC Thiruvananthapuram.
64. Ion - Acoustic Solitary Waves in a Magnetized Five Component Cometary Plasma with Kappa Described Electrons and Nonextensive Pair Ions **Manesh Michael**, Anu Varghese, Neethu T Willington, Sijo Sebastian, Sreekala G. and Chandu Venugopal^{5th} PSSI Colloquium (2016) 27 – 28 August, Ravenshaw University, Cuttack.
65. Oblique Solitary Waves in a Five Component Plasma with Pair Ions **Sijo Sebastian**, Neethu T Willington, Anu Varghese, Neethu Jayakumar and Chandu Venugopal Intl. Conf. Plasma Science, Technology & Applications, (2016) , Amity University, 20 – 22nd January, Lucknow, India, OP31
66. Fast and Slow Mode Solitary Waves in a Five Component Multi-Ion Plasma **Sijo Sebastian**, Manesh Michael, Sreekala G, Anu Varghese and Chandu Venugopal^{18th} International Congress on Plasma Physics (2016), Kaohsiung, Taiwan on June 27th to July 1st 2016.
67. Oblique Ion-Acoustic Shock Waves in a Magnetized Five Component Cometary Plasma **Manesh Michael**, Anu Varghese, Neethu Theresa Willington, Sijo Sebastian , Sreekala G, and Chandu Venugopal Intl. Conf. Frontiers of Physics and Plasma Science (2016), 7 - 8 November 2016, Ujjain, India.

68. Pressure Anisotropy Effects on Solitary Waves in Five Component Plasmas **Sijo Sebastian**, Sreekala G, Anu Varghese, Manesh Michael and Chandu Venugopal Oral presentation at Joint 13th Asia Pacific Physics Conference 22nd Australian Institute of Physics Congress(2016) , 4 – 8 December, Brisbane Australia.
69. S. Sajna, P. Sreekanth, Reji Philip, P.R. Biju, N.V. Unnikrishnan, *Tin telluride nanoparticles for Potential Optical Limiting Applications, DAE-BRNS National Laser Symposium (NLS-25)*, KIIT University, Bhubaneswar (December 2016).
70. M.S. Sajna, Cyriac Joseph, P.R. Biju, V.P. Prakashan, M.S. Sanu, N.V. Unnikrishnan, “*Spectroscopic Studies of Dy³⁺ -Doped Fluoroborate Glasses*”, *International Conference on Science, Engineering, Technology & Management (ICSETM-2017)*, K. E. College, Mannanam (March 2017).
71. M.S. Sajna, P.R. Biju, N.V. Unnikrishnan, “*Spectral Broadening and Luminescence Quenching of Near Infrared Emission in Er³⁺ -doped Tellurite Glasses*” *International Meeting on Highly Correlated Systems IMHCS-2017*, Mahatma Gandhi University, Kerala (March 2017).
72. Prakashan VP, Sajna M S, Sanu M S, Cyriac Joseph, NV Unnikrishnan, *Structural and spectroscopic characterisations of TiO₂-ZrO₂:Eu³⁺+ZnO hybrid matrix*, 25th DAE-BRS NATIONAL LASER SYMPOSIUM (NLS-25) Decemer 2016.
73. Prakashan, Cyriac Joseph, N V Unnikrishnan, *Spectroscopic characterisations of Eu³⁺ Doped TiO₂-SiO₂- ZrO₂ Ternary matrix*, V P IMHSC 2017-March 2017.
74. Sanu Mathew Simon, Cyriac Joseph, N.V. Unnikrishnan, *Structural Studies of ZrO₂-TiO₂-Pluronic F127 Composite as a Viable Host for Self-Cleaning Applications*, Presented at International Meeting on Highly Correlated Systems, 24-26 March 2017, SPAP, MG University, Kottayam.
75. Sanu.M.Simon, Sajna.M.Shamsudeen, Prakashan Valparambil , Anoop Chandran, Cyriac Joseph, Nelliparambil.V. Unnikrishnan, *Synthesis and characterisation of ZrO₂-TiO₂-Pluronic F127 composite as a self cleaning device material*, Presented at International Symposium on New Trends in Applied Chemistry, 9-11 February 2017, SH College, Thevara, Kochi.

Criterion 3.2 Details regarding Major projects

Title	Major /Minor	funding agency	Fund sanctioned	Stage	Name of PI/coordinator
Development of one dimensional multiferroic	Major	SRS scheme- KSCSTE-Govt. of	9,79,660 /-	On going	Dr. Nandaku

nanocomposites for device applications		Kerala			mar Kalarikka 1
Physics of Cavitation Bubbles and Hydrogen Generation during Liquid Phase Laser Ablation	Major	BRNS/BRFST-DAE-Govt. of India	34,96,576 /-	On going	
Nanoparticle aggregation behavior in polymer nanocomposites	Major	UGC-DAE-CSR Kolkata	8,20,000 /-	On going	
Design and applications of magnetically responsive self-assembled polymer nanocomposites	Major	DST-Nano Mission-Govt. of India	2,23,45,200 /-	On going	
Biobased Scaffolds, Membranes and Hydrogels for Improved Wound Healing and Bone Regeneration (BIOHEAL)	Major	Swedish Research Link Grant in collaboration with Prof. Aji Mathew, University of Stockholm, Swedan	37,33,100 /-	Approved	
Advanced Nanocomposites for Micro and Nanosensors Applications	Major	PICS scheme with Prof. Didier ROUXEL, Institut Jean Lamour - UMR CNRS n°7198- Université de Lorraine- BP 70239 - 54506 Vandœuvre-lès-Nancy Cedex – France	Fund for student exchange program and other contingencies	Approved	

3.4 Details of Research publications

1. Raj DR, Prasanth S, Sudarsanakumar C. Development of LSPR-Based Optical Fiber Dopamine Sensor Using L-Tyrosine-Capped Silver Nanoparticles and Its Nonlinear Optical Properties. *Plasmonics*. 2016:1-8.
2. Prasanth S, Raj DR, Thomas RK, Vineeshkumar TV, Sudarsanakumar C. A systematic investigation on the interaction of l-cysteine functionalised Mn₃O₄ nanoparticles with lysozyme. *RSC Advances*. 2016;6(107):105010-20
3. Anugop B, Prasanth S, Raj DR, Vineeshkumar TV, Pranitha S, Pillai VM, Sudarsanakumar C. Role of Mn²⁺ concentration in the linear and nonlinear optical properties of Ni_{1-x}Mn_xSe nanoparticles. *Optical Materials*. 2016 Dec 31;62:297-305.

4. Cinumon KV, Prasanth S, Raj DR, Vineeshkumar TV, Pillai VM, Sudarsanakumar C. Optical nonlinearities of iron doped zinc sulphide quantum dots. In AIP Conference Proceedings 2017 May 19 (Vol. 1832, No. 1, p. 050129). AIP Publishing.
5. Vineeshkumar TV, Raj DR, Prasanth S, Sankar P, Unnikrishnan NV, Pillai VM, Sudarsanakumar C. Composition dependent structural, Raman and nonlinear optical properties of PVA capped Zn_{1-x} Cd_x Cu_y S quantum dots. *Optical Materials*. 2016 Aug 31;58:128-35.
6. Prasanth S, Raj DR, Vineeshkumar TV, Thomas RK, Sudarsanakumar C. Exploring the interaction of L-cysteine capped CuS nanoparticles with bovine serum albumin (BSA): a spectroscopic study. *RSC Advances*. 2016;6(63):58288-95.
7. Raj DR, Prasanth S, Vineeshkumar TV, Sudarsanakumar C. Surface Plasmon Resonance based fiber optic sensor for mercury detection using gold nanoparticles PVA hybrid. *Optics Communications*. 2016 May 15;367:102-7.
8. Raj DR, Prasanth S, Vineeshkumar TV, Sudarsanakumar C. Surface plasmon resonance based fiber optic dopamine sensor using green synthesized silver nanoparticles. *Sensors and Actuators B: Chemical*. 2016 Mar 1;224:600-6.
9. Raj DR, Sudarsanakumar C. Colorimetric and Fiber Optic Sensing of Cysteine Using Green Synthesized Gold Nanoparticles. *Plasmonics*. 2017:1-8.
10. Raj DR, Sudarsanakumar C. Surface plasmon resonance based fiber optic sensor for the detection of cysteine using diosmin capped silver nanoparticles. *Sensors and Actuators A: Physical*. 2017 Jan 1;253:41-8.
11. Haris, P.; Mary, V.; Aparna, P.; Dileep, K. V; Sudarsanakumar, C. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy A Comprehensive Approach to Ascertain the Binding Mode of Curcumin with DNA*. *Spectrochim. Acta Part A Mol. Biomol. Spectrosc.* **2017**, *175*, 155–163.
12. Possible density dependent local variations in the IMF Indulekha Kavila, Babitha George IAUS 2016 315E 40
13. Remya Mohan P, Subash Gopi, Viji Vidyadharan, Anns George, Cyriac Joseph, N.V. Unnikrishnan, P.R. Biju*, Synthesis and luminescence characteristics of CaB₂O₄:Er³⁺, Li⁺ phosphor, *Journal of Luminescence*, 187(2017)113-120.
14. P. Remya Mohan, Viji Vidyadharan, E. Sreeja, Cyriac Joseph, N. V. Unnikrishnan, P. R. Biju*, Judd-Ofelt analysis, structural and spectroscopic properties of sol-gel derived LaNbO₄:Dy³⁺ phosphors, *Journal of materials science: materials in electronics*, 28(2017)10250-10261.

15. Saritha K Jose, Subash Gopi, Sanu Mathew Simon, Remya Mohan P, Cyriac Joseph, N. V. Unnikrishnan, P.R. Biju, Structural and optical characterization of Eu^{3+} doped polymer-zirconia composites, *Journal of Non-Crystalline solids*, 452(2016)245-252.
16. Viji Vidyadharan, , Subash Gopi, Remya Mohan P, Vinoy Thomas, Cyriac Joseph, N.V. Unnikrishnan, P.R. Biju*, Judd-Ofelt analysis of Pr^{3+} ions in $\text{Sr}_{1.5}\text{Ca}_{0.5}\text{SiO}_4$ and $\text{Sr}_{0.5}\text{Ca}_{0.5}\text{TiO}_3$ host matrices, *Optical Materials*, 51(2016)62-69.
17. Tunable emission and excited state absorption induced optical limiting in $\text{Tb}_2(\text{MoO}_4)_3$: $\text{Sm}^{3+}/\text{Eu}^{3+}$ nanophosphors K P Mani, P Sreekanth, G Vimal, P R Biju, N V Unnikrishnan, M A Ittyachen, R Philip, C Joseph, *Optical Materials*, 62 (2016) 110-118.
18. Growth and characterization of Sm^{3+} doped cerium oxalate single crystals M C Mary, G Vimal, K P Mani, G Jose, P R Biju, NV Unnikrishnan, C Joseph *Journal of materials Research and Technology*, 5(3) (2016) 268–274.
19. Spectroscopic and phonon side band analysis of $\text{Tb}_{2-x}\text{Eu}_x(\text{MoO}_4)_3$ nanophosphor K P Mani, G Vimal, P R Biju, N V Unnikrishnan, M A Ittyachen, C Joseph *Journal of Molecular Structure* 1105 (2016) 279-285.
20. Evidence for enhanced optical properties through plasmon resonance energy transfer in silver silica nanocomposites B Mol, L K Joy, H Thomas, V Thomas, C Joseph, T N Narayanan, N V Unnikrishnan, M R Anantharaman *Nanotechnology* 27 (8) (2016) 085701-085710.
21. Structural and optical characterization of Eu^{3+} doped polymer-zirconia composites S K Jose, S Gopi, S M Simon, C Joseph, N V Unnikrishnan, P R Biju *Journal of Non-Crystalline Solids* 452 (2016) 245-252
22. NIR emission studies and dielectric properties of Er^{3+} doped multicomponent tellurite glasses M S Sajna, S Thomas, C Jayakrishnan, C Joseph, PR Biju, N.V. Unnikrishnan *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 161 9 (2016) 130-137.
23. Luminescent characteristics of UV excited $\text{Sr}_{0.5}\text{Ca}_{0.5}\text{TiO}_3$: Pr^{3+} reddish-orange phosphor V Vidyadharan, C Joseph, NV Unnikrishnan, P R Biju *Materials Chemistry and Physics* 170 (2016) 38-43.
24. Judd–Ofelt analysis of Pr^{3+} ions in $\text{Sr}_{1.5}\text{Ca}_{0.5}\text{SiO}_4$ and $\text{Sr}_{0.5}\text{Ca}_{0.5}\text{TiO}_3$ host matrices V Vidyadharan, S Gopi, M P Remya, V Thomas, C Josep *Optical Materials* 51 (2016) 62-69.

25. Structural and optical characterization of Eu³⁺ doped polymer-zirconia composites SK Jose, S Gopi, SM Simon, C Joseph, NV Unnikrishnan, PR Biju *Journal of Non-Crystalline Solids* 452 (2016)245-252.
26. Spectroscopic and photoluminescence characterization of Dy³⁺ in Sr_{0.5}Ca_{0.5}TiO₃ phosphor V Vidyadharan, E Sreeja, SK Jose, C Joseph, NV Unnikrishnan, PR Biju *Luminescence* 31 (1) (2016) 202-209.
27. Dielectric properties of Sr_{0.5}Ca_{0.5}TiO₃: xPr³⁺ ceramics V Viji, E Sreeja, C Joseph, N V Unnikrishnan, P R Biju *Ceramics International* 43 (8) (2017) 6268-6275.
28. Photoluminescence properties of fully concentrated Terbium oxalate: A novel efficient green emitting phosphor D Alexander, K Thomas, S Sisira, G Vimal, KP Mani, P R Biju, N V Unnikrishnan, M A Ittyachan, C Joseph *Materials Letters* 189 (2017) 160-163.
29. Microstructural characterization and optical properties of green emitting hexagonal and monoclinic CePO₄: Tb³⁺ nanocrystals S Sisira, D Alexander, K Thomas, G Vimal, K P Mani, P R Biju, NV Unnikrishnan, C Joseph *Materials Research Express* 4 (2) (2017) 025010.
30. Synthesis and luminescence characteristics of CaB₂O₄: Er³⁺, Li⁺ phosphor S Gopi, V Vidyadharan, A George, C Joseph, NV Unnikrishnan, PR Biju *Journal of Luminescence*
31. Spectroscopic investigations and phonon side band analysis of Eu³⁺ doped multicomponent tellurite glasses MS Sajna, S Gopi, VP Prakashan, MS Sanu, C Joseph, PR Biju, NV Unnikrishnan *Optical Materials* 70(2017) 31-40.
32. Judd–Ofelt analysis, structural and spectroscopic properties of sol–gel derived LaNbO₄: Dy³⁺ phosphors PR Mohan, V Vidyadharan, E Sreeja, C Joseph, NV Unnikrishnan, PR Biju *Journal of Materials Science: Materials in Electronics* (2017)1-12.
33. Composition-structure-physical property relationship and nonlinear optical properties of multiferroic hexagonal ErMn_{1-x}Cr_xO₃ Nanoparticles, B.Raneesh et.al., *RSC Adv.*, 2015,5,12480
34. Size Dependent Nonlinear Optical Absorption In BaTiO₃ Nanoparticles, Tesfakiros Woldu et.al., *Chemical Physics Letters*, 2015, 625, 58-63
35. Enhanced lithium storage in ZnFe₂O₄-C nanocomposites produced by a low-energy ball milling, R. M.Thankkachan et.al., *Journal of Power Sources*,282(2015),462-470
36. Transport characteristics of organic solvents through carbon nanotube filled styrene butadiene rubber nanocomposites: the influence of rubber–filler interaction, the degree

- of reinforcement and morphology, Jiji Abraham et.al., *Phys. Chem. Chem. Phys.*, 2015, **17**, 11217-11228
37. Dose-Dependent Effects of Gamma Irradiation on the Materials Properties and Cell Proliferation of Electrospun Polycaprolactone Tissue Engineering Scaffolds, Robin Augustine., International Journal of Polymeric Materials and Polymeric Biomaterials,(2015) 64:10, 526-533
 38. Positron Annihilation Spectroscopic Studies of Multiferroic $\text{Bi}_{1-x}\text{Pr}_x\text{FeO}_3$ Nanocrystalline Compounds, Jincemon Cyriac et.al., Journal of Physics: Conference Series 618 (2015)012012
 39. Green Synthesis of Yellow emitting PMMA-CdSe/ZnS Quantum Dots Nanophosphors, Materials Science in Semiconductors, Sneha Mohan et.al., Material Science in Semiconductor Processing 39 (2015) 587-595
 40. Chemistry associated with natural rubber–graphene nanocomposites and its effect on physical and structural properties. Srinivasarao Yaragalla et.al., Industrial Crops and Products 74 (2015) 792–802.
 41. Effect of reinforcement on the barrier and dielectric properties of epoxidized natural rubber–graphene nanocomposites, Yaragalla, S., et.al, Polym Eng Sci., 55: 2439–2447, 2015
 42. Fabrication of graphite-graphene-ionic liquid modified carbon nanotubes filled natural rubber thin films for microwave and energy storage applications, S Yaragalla, et.al, Journal of Polymer Research 22 (7), 1-10, 2015
 43. Preparation of Epoxy Graphene and Its Structural and Optical Properties, Srinivasarao Yaragalla et.al. Adv. Mater. Lett. 2015, 6(10), 848-852
 44. An *in vitro* method for the determination of microbial barrier property (MBP) of porous polymeric membranes for skin substitute and wound dressing applications, Robin Augustine et.al., Tissue Engineering and Regenerative Medicine, 2015, 12, 1, 12-19
 45. Green synthesis of CdSe/ZnS core-shell quantum dot nanophosphors and its Poly methyl methacrylate composite thin film in the visible spectral range, S Mohan et.al., MRS Proceedings 1748, Volume 1748 / 2015
 46. Cr^{3+} -substitution induced structural reconfigurations in the nanocrystalline spinel compound ZnFe_2O_4 as revealed from X-ray diffraction, positron annihilation and Mössbauer spectroscopic studies ,Rahul Mundiyanil Thankachan et.al , *RSC Adv.*, 2015,5, 64966-64975

47. Electric, magnetic and optical limiting (short pulse and ultrafast) studies in phase pure $(1 - x)$ BiFeO_3 - $x\text{NaNbO}_3$ multiferroic nanocomposite synthesized by the pechini method, Rehana P. Ummer, et.al, *RSC Adv.*, 2015,5, 67157-67164
48. Effect of ZnO Nanoparticles on the In Vitro Degradation of Electrospun Polycaprolactone Membranes in Simulated Body Fluid, R Augustine et.al, *International Journal of Polymeric Materials and Polymeric Biomaterials* (2015)
49. Antibacterial and Sensing Properties of Dextrose Reduced Starch- Capped Silver Nanoparticles Synthesized via a Completely Green Method, S Mohan et.al., *Materials Today: Proceedings* 2 (7), 3943-3949
50. Clogging Free Electrospinning of Polycaprolactone Using Acetic Acid/Acetone Mixture, R Augustine et.al, *Polymer-Plastics Technology and Engineering* (DOI: 10.1080/03602559.2015.1036451)
51. Synthesis and characterization of polyaniline coated gold nanocomposites , S N M Zuber et.al., *PHYSICS AND MATERIALS SYMPOSIUM: International Conference on Applied Sciences and Industrial Technology (ICASIT2015.AIP Conf. Proc. 1674, 020010* (2015)
52. Electrospun PCL membranes incorporated with biosynthesized silver nanoparticles as antibacterial wound dressings, R Augustine, et.al. *Applied Nanoscience*, 1-8 (DOI 10.1007/s13204-015-0439-1)
53. Structural and Optical Properties of Functionalized Multi-walled Carbon Nanotubes, Srinivasarao Yaragalla et.al, *Materials Science in Semiconductor Processing* (2015), (DOI 10.1016/j.mssp.2015.10.022)
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S Mohan, OS Oluwafemi, SP Songca, VP Jayachandran, D Rouxel, N Kalarikkal, Sabu Thomas *Journal of Molecular Liquids* 213, 75-81 (2016)
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79. Nylon 6, 12/Cloisite 30B Electrospun Nanocomposites for Dental Applications SS Babu, A Augustine, N Kalarikkal, S Thomas *Journal of Siberian Federal University. Biology* 9 (2), 198 (2016)
80. Nonlinear transmittance and optical power limiting in Magnesium ferrite nanoparticles: effects of laser pulsewidth and particle size Sreekanth Perumbilavil, Kishore Sridharan, Ann Rose Abraham, Harsha P J anardhanan, Nandakumar Kalarikkal and Reji Philip *RSC Advances*, DOI: 10.1039/C6RA15788B (2016)
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82. Korteweg-deVries-Burgers (KdVB) equation in a five component cometary plasma with kappa described electrons and ions Manesh Michael, Neethu T Willington, Neethu Jayakumar, Sijo Sebastian, Sreekala G and ChanduVenugopal *J TheorAppl Phys* (2016) DOI 10.1007/s40094-016-0228-6 **10** 289 – 296
83. Fast and Slow Mode Solitary waves in a Five-Component Plasma Sijo Sebastian, Manesh Michael, Sreekala G, Anu Varghese and ChanduVenugopal *Brazilian J Phys* (2016) DOI 1007/s 13538 – 016 – 0465 – 9

84. A Regional Geomagnetic Model using Fourier Analysis R Jayapal, Shenu Gopal, C P Anilkumar and ChanduVenugopal *Int. Res. J Nat. & Appl. Sci.* (2016) **3** 1 – 14
85. Ion-Acoustic Double Layers in a Five Component Cometary Plasma with Kappa described Electrons and Ions Manesh Michael, Sreekala G, Sijo Sebastian, Neethu Theresa Willington, Anu Varghese and ChanduVenugopal *IOSR J Applied Phys.* (2016) **8** 32 – 42.
86. SEP events and wake region lunar dust charging with grain radii S B Rakesh Chandran, S R Rajesh, A Abraham, G Renuka and ChanduVenugopal *Adv. Space Res.* (2017) **59** 483 – 489
87. Stability of the magnetosonic wave in a cometary multi-ion plasma Sreekala G, Anu Varghese, Neethu Jayakumar, Manesh Michael, Sijo Sebastian and ChanduVenugopal *Adv. Space Res.* (2017) **59** 2679 – 2688
88. Effect of lighter and heavier pair ions on solitary waves S Sijo, V Anu, M Manesh, G Sreekala, T W Neethu, D E Savithri and C Venugopal *J Phys: Conf. Series* (2017) **836** 012003
89. Oblique ion-acoustic shock-waves in a magnetized, multi-species plasma Manesh Michael, Anu Varghese, Neethu Theresa Willington, Sijo Sebastian, Savithri Devi E, Sreekala G and ChanduVenugopal *J Phys: Conf. Series* (2017) **836** 012007
90. Effect of Anisotropy of Lighter and Heavier Ions on Solitary Waves in a Multi-Ion Plasma M. Manesh, S. Sijo, V. Anu, G. Sreekala, T. W. Neethu, D. E. Savithri and C. Venugopal *Phys. Plasmas* (2017) **24** 062905
91. Rogue Waves in Multi Ion Cometary Plasmas G Sreekala, M Manesh, T W Neethu, V Anu, S Sijo and C Venugopal *Plasma Phys. Reports* (2017) (In Press)
92. Stability of Kinetic Alfvén Wave (KAW) in a Cometary Plasma with Streaming Electrons and Protons Sreekala G., Sijo Sebastian, Manesh Michael, Savithri Devi E., C. P. Anilkumar, and ChanduVenugopal *Plasma and Fusion Science: From Fundamental Research to Technological Applications* Ed B Raneesh et al (2017) Apple Academic Press, Canada.

Criterion 3.10 Revenue generated

Rs 2,68,812/-

Criterion 3.11 No of conferences organized by the institution

1. Workshop on Free & Open Source Software October 2016 Satish Babu ICFOSS Director
2. IMHCS-2017: International Meeting on Highly Correlated Systems March 2017
3. National Science Day Celebration February 29 Talk by Prof. Ajith Parameswaran, International Center for Theoretical Sciences -TIFR, Bengaluru

Criterion 3.12 No of Faculty served as experts ,chairpersons**resource persons Resource Person**

1. C.Sudarsanakumar, International meeting on Highly Correlated Systems (IMHCS-2017), School of Pure and Applied Physics and IIUCNN, mahatma Gandhi University.
2. C.Sudarsanakumar, Workshop on computational chemistry and Applications, KSCSTE , SRIBS kottayam, Januray 2017
3. C.Sudarsankuar, 11th Asia Pacific Conference on Sustainable Energy and Environmental Technologies (APCSEET 2017), B. R. Ambedkar Bihar University, Muzaffarpur, March 2017.ss

Resource Person by K Indulekha

4. Inaugural session Talk at the International Seminar on Globalization and India's Innovation System: A Creative Destruction? Feb 2017
5. Chair for session at International Meeting on Highly Correlated Systems SPAP MGU March 2017
6. Invited Talk IUCAA CUSAT Workshop on Statistical Analysis in Cosmology "*Lighting up the cosmos -Star Formation*" Jan 2017
7. Chair for two scientific sessions -Astronomical Society of India Annual Meeting at Jaipur March 2017

Criterion 3.17 Details of Research Awards/ Recognitions received by the faculty &Research fellows

1. Best Oral Presentation Award "*An Exploration of the Possibility of Bootstraps between Physical Processes in an Ecosystem, due to some of the Inter-relationships between Soil, Water, Plants, Animals and Climate*" National Seminar on Natural Resources Management for Horticultural Crops under Climate Change CWRDM Kozhikode by K Indulekha March 2017

SCHOOL OF SOCIAL SCIENCES

Dr. Raju S

Book Published:

1. *Random Walk Through Historiography: South India*, 2016, Kerala Council for Historical Research, Thiruvananthapuram. ISBN No:81-85499-57-8

Dr. P. Sanal Mohan

Edited Book

April 2017, Oru Gramam Nooru Ormakal. IUCSSRE and Greenline Publications Trivandrum

Book Chapters

Social Space, Civil Society and Dalit Agency in 'Twentieth Century Kerala' in a *Dalit Studies* (ed) Ramnarayan Rawat, K.Satyanarayana, Gopal Guru, Duke University Press ,2016

Dr. Rajesh Komath

Publications

Course Material Preparation

Prepared Block 3 titled “**Emancipation of Marginalised Section**” for the Certificate Programme/Course on Life and Thought of Dr. B.R. Ambedkar, IGNOU, School of Social Sciences, Faculty of Sociology.

Books

- **Green Economics: Need of the Contemporary World** (Department of Economics, NMSM Government College, Kalpetta, ISBN: 978-93-5254-254-3).
- **Theyyam: The Other Gods** (Stark World Publishing Private Ltd, 2012: ISBN 978-81-906936-1-5), Co-authored with Bhawani Cheerath-Rajagopalan.
- **Nattudaivangal Samsarichu Thudangumbol** (When Local Gods Start Speaking) Mathrubhumi Books, 2013: ISBN : 978-81-8265-868-4.

Articles

- **Ambedkar Will Teach the Nation from His Statues** in Economic and Political Weekly, Vol. 52, Issue No. 25-26, 24 June, 2017.
- **The Subversion of Institutions and Creation of a Cultural Discourse** in Economic and Political Weekly, Vol. 52, Issue No. 16, 22 April, 2017.

- **How did Untouchability Deprived India? Contextualising Ambedkar's Perspective** in the Journal of Parliamentary Affairs, Government of Kerala, Vol. 8, 2017.
- **Addressing Caste Prejudice** in Economic and Political Weekly, Vol L9, No. 19.May 7, 2016.

Smt. Radhika P

Publications

Co-edited the proceedings of the International conference on Education for Peace Social inclusion and Sustainable Development: 'Towards a paradigm shift' published by School of International Relations, M G University, Kottayam

SCHOOL OF TOURISM STUDIES

Visiting faculty

1. Dr.Abey Kuruvilla, Associate Professor, University of Wisconsin-Parkside,USA
2. Dr. Toney K Thomas, Associate Professor, Taylor's University, Malaysia
3. Dr Vinayraj Mothiravally Associate Professor, Taylor's university Malaysia
4. P Vijayachandran, Former Managing Director, KTDC
5. Krishnachandran P K. General Manager, Intersight Tours, Cochin
6. Jojo John, Head (Sales & Marketing),The Serai Resorts
7. Dr. B George, Associate Professor, Madurai Kamaraj University
8. John George, Business Head (Tours),UAE Exchange and Financial Services
9. K M Unnikrishanan, Executive Director, Decor Aviation, Bangalore
10. Dr. Sampad Kumar Swain, Professor, Amarkantak Central University
11. S Vijayakumar, Director, Ecospace tourism Innovations
12. Joshy Mathew, Destination Manager, Trianz, Bangalore
13. Biju George, ILO Certified Trainer
14. Dr. R Kannan, Professor, Madurai Kamaraj University

Confrence Procedings

Dr. Robinet Jacob

1. **Measuring Cognitive Indices of tourist satisfaction for Internal Destination Performance Evalutipon in an Tourist Destination.** , 6th Asia Euro Confernce2016, 9-12 November 2016
2. **“Destination Branding through Community Involvement: A case study of ‘Discover Kottayam’initiative from Kerala”**, accepted for a full paper presentation in

the conference of ICBTS International Sustainable Development Business and Tourism, Boston, USA, June 30 - July 1, 2016

3. **“Barrier Free Tourism in Tourism Destinations of Kerala, India-An Access Audit”**, accepted for a full paper presentation in the conference of IABE- International Academy of Business and Economics, Florence-Pisa, Italy from June 16 -18, 2016

Cyril Mathew

1. HrudayamHridayathodu, (2012), D.C Books, Kottayam (ISBN No – 978-81-264-3556-2)
2. Le Francais pour Tous (2013), French Text book for MTTM, M.G University publications , Second edition 2016 (ISBN No -978-93-80419-26-8)

Anita T.A

1. “Healthcare in Kerala: From the perspective of Ayurveda Tourism and Medical Tourism” for “International Seminar on Traditional Medicine and Wellness Tourism” at Pazhassiraja College Pulpally- 21st and 22nd February 2017 (Co-authored)

DEPARTMENT OF LIFE LONG LEARNING AND EXTENSION

- **National Seminar on the Trends and Developments in the Education of Children with Learning Disabilities 7 May 2016**

The department organized a national Seminar on the Trends and Developments in the Education of Children with Learning Disabilities on 7 May 2016. The co-organizer of the seminar was Institute of Research in Learning Disabilities, School of Behavioural Sciences, MG University.

- **Two Days TCI workshop from May 9th to 11th 2016**

Theme-Centered interaction (TCI) is a concept and a method for working in groups. Its aim is social learning and development of the person. A two day workshop was arranged by the Department of Lifelong Learning and Extension in association with the National Service Scheme of the Mahatma Gandhi University on the above topic.

- **National Seminar on Blood and Organ Donation-Scientific and Motivational Aspects -5th to 7th October 2016.**

The objective of the national seminar was to give some basic ideas on the scientific aspects of organ/blood donation. The seminar also focused on the legal awareness, ethical issues and counseling needs regarding organ/blood so as to eradicate the ignorance among the common people in this regard.

- **International Conference –“Envision- A holistic View on Empowering Women: 15-16 November, 2016**

The objective of the seminar was to stimulate a holistic progress in women empowerment by creating an encouraging environment for social change for a good cause. The Conference brought together eminent Scholars, academicians, policy makers, researchers, social workers, NSS volunteers, students and experts from India and abroad to discuss the multi- dimensional aspects in empowering women.

The recommendations of the Conference was submitted to the policy makers and other concerned departments for information.

Department/Society Linkages in Extension Activities

1. Athirampuzha Grama Panchayat – Adoption of Ward 4 and Ward 8 for Socio-Economic Development Initiatives
2. Athirampuzha Grama Panchayat- Adoption of Kattathy Government LP School, to be converted as a model school.
3. Received the Best Programme Co-ordinator Award during the year 2013-14 and 2015-16
4. Received the Kamala Dalam Award in 2016.
5. Received Synergy Award for the Empowerment of Youth in 2016

**INTERNATIONAL AND INTER UNIVERSITY CENTRE FOR NANO SCIENCE AND
NANOTECHNOLOGY**

2.5 Faculty participation in conferences and symposia

1	“XXI IUPAC CHEMRAWN - Solid Urban Waste Management, Rome, Italy	6 th April 2016 to 8 th April 2016.	Plenary Speaker at XXI IUPAC CHEMRAWN - Solid Urban Waste Management.
2	Invited speaker for (The World Academy of Sciences) TWAS Research Grants Conference - Shaping Careers in Science, Trieste, Italy	19 th to 22 nd April , 2016	Plenary Speaker at TWAS Research Grants Conference
3	WasteEng2016, Conference , Albi, France	23 rd to 26 May, Albi France.	Plenary speaker at WasteEng2016, Conference , Albi, France
4	“Progress in Composite Technology for King Mongkut’s University of Technology, Bangkok, Thailand.	2 nd to 3 rd June, 2016	Invited speaker for the seminar entitled “Progress in Composite Technology for King Mongkut’s University of Technology, Bangkok, Thailand.
5	Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong	Aug 30 th - Sep 3 rd 2016	As an invited speaker to deliver public lectures at Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
6	Universidade Federal de Uberlândia, Brazil,	Sept 15 th – Sept 20 th 2016	To evaluate the progress of an Indo-Brazil project jointly funded by DST & CNPq
7	Workshop on “Biotechnology of novel materials and the environment” organised by Siberian Federal University, Krasnoyarsk, Russia	Oct 8 th – Oct 14 th 2016	Plenary lecture at workshop on “Biotechnology of novel materials and the environment” organised by Siberian Federal University, Krasnoyarsk, Russia
8	The International Rubber conference (IRC 2016), Kitakyushu, Japan	Oct 23 rd – Oct 26 th 2016.	Plenary lecture at The International Rubber conference (IRC 2016), Kitakyushu, Japan.
9	Eurofillers Polymer Blends 2017 conference, Greece	April 23- April 27 2017	Keynote lecture at Eurofillers Polymer Blends 2017 conference, Greece

10	Fifth International conference on Natural polymers, Bio-polymers, Bio Materials, their composites, Nanocomposites, Blends IPNs, Polyelectrolytes and Gels: Macro to Nano scales (ICNP 2017 Rio)	June 7-9, 2017	Plenary speaker at ICNP 2017 Rio.
11	Malaysia polymer international conference	July 17-20 2017	Plenary speaker

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	Nil
UGC – Faculty Improvement Programme	2
HRD programmes	Nil
Orientation programmes	Nil
Faculty exchange programme	Nil
Staff training conducted by the university	Nil
Staff training conducted by other institutions	Nil
Summer / Winter schools, Workshops, etc.	2
Others	

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	Nil	2	Nil	2
Technical Staff	Nil	2	Nil	Nil

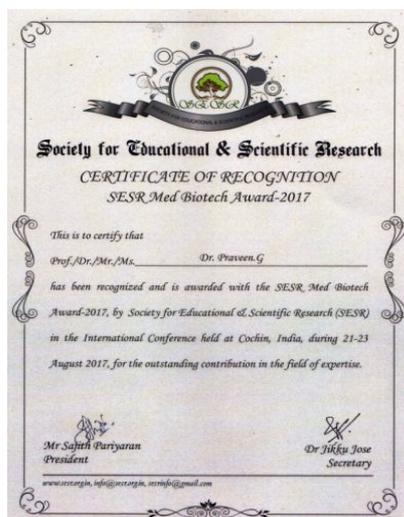
3.17. No. of research awards/ recognitions received by faculty and research fellows

Prof.Sabu Thomas

1. Awarded Loyalty Award “International Materials Technology Conference Exhibition” May 2016 & Honourable member of IMTCE, Loyalty Award Club (Membership Number -IMTCE-LC-017)
2. Awarded Dr. APJ Abdul Kalam Award for Scientific Excellence – 2016
3. Mahatma Gandhi University- Award for Outstanding Contribution –Nov. 2016
4. Awarded Lifetime Achievement Award, Indian Nanobiologists 2017
5. Awarded Doctorate Honoris Causa- Université de Lorraine France 2017
6. Selected for the Fulbright scholarship- Nehru –Fulbright fellowship for 2017.

Praveen Govindh, PhD, Postdoctoral Fellow (UGC-DSK)

1. **Early career travel grant** for advanced training at [Centre for iPSC Cell Research and Application \(CiRA\), Kyoto University, Japan](#) [Famed for the breakthrough invention of iPSCs by Prof. Shinya Yamanaka - 2012 Nobel prize in Physiology/ Medicine] fully funded by Department of Biotechnology, Government of India (ASHD-CiRA program) 15th - 17th November 2017. {One among 5 candidates from India selected for the year}
2. [SESAR Med Biotech Award 2017](#), National recognition of Society of Educational and Scientific Research (SESAR) in the field of Medical Biotechnology awarded during SciCon CTBio International conference at Cochin on 21st August 2017.



3. [Best Paper presentation award](#) in Research Scholars' Confluence and Alumni meet (ReSConAM-'17) of Indian Institute of Technology (IIT- Bombay) - during 18th and 19th of March 2017.



ReSConAM'17

Research Scholars' Confluence and Alumni meet 2017

IIT BOMBAY



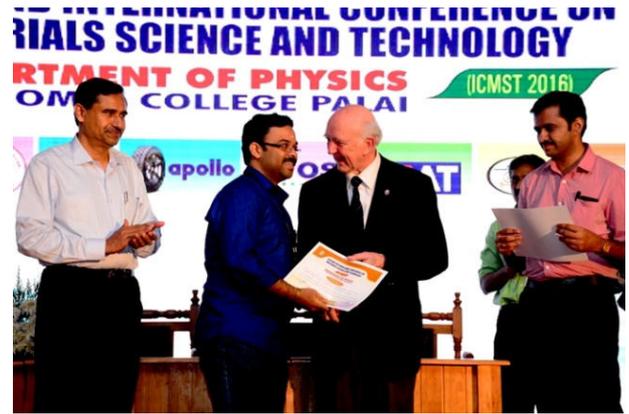
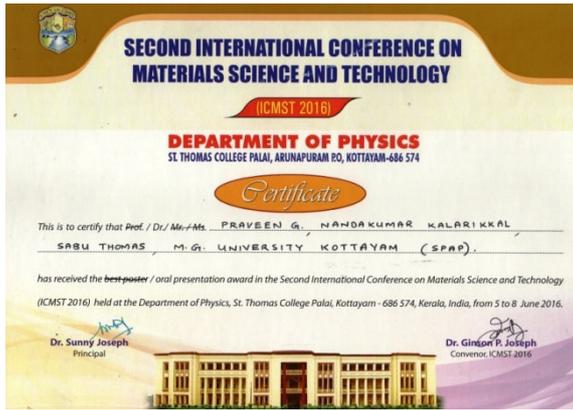
4. **Best Paper presentation award** under Innovations in Bio-Medical Engineering track (T7) of **Kerala Technological Congress-2017** jointly organized by A.P.J.Abdul Kalam Technological University, Kerala (KTU) and Kerala State Council for Science, Technology and Environment (KSCSTE). (13th and 14th January 2017).



5. **First prize in PSG Nanochallenge -2016**, a national level competition in nanotechnology applications jointly organized by PSG Institute of Advanced Studies, Coimbatore and State University of New York - Colleges of Nanoscale Science and Engineering (SUNY-CNSE), USA. 17th August 2016.



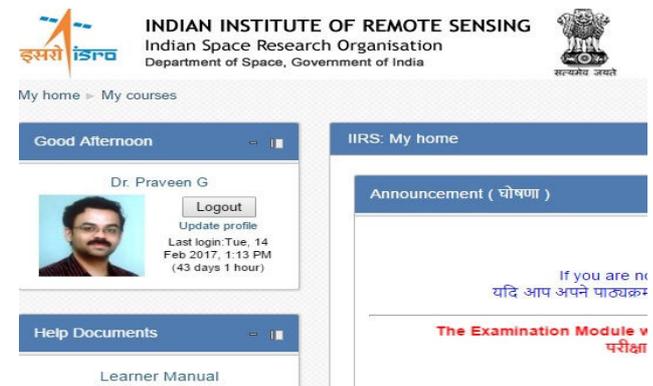
6. **ICMST Young Researchers Award** in Second International Conference on Material Science and Technology (ICMST-2016) organized by Department of Physics, St. Thomas College, Palai, Kerala. (5th to 8th, June 2016).



- Successfully completed the GIAN-MHRD programme on ‘Nanobiotechnology for Healthcare’ conducted by Indian Institute of Technology (IIT –Kharagpur) during 29th June to 8th July 2017.



- Successfully completed the 18th Outreach Programme on “[Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System](#)” conducted by Indian Institute of Remote Sensing (ISRO- Govt. of India) during 22nd August to 18th November 2016.



- Selected with Industrial sponsorship to attend Molecular Spectroscopy Workshops on “UV-Vis-NIR Techniques for Advanced Material Characterization” and “FTIR Microscopy and Chemical Imaging” conducted at [Agilent Technologies Centre of Excellence](#), Manesar (Gurgaon), India during 9th and 10th June 2016.



Criterion – III

Research, Consultancy and Extension

MOU signed with the following Industries:

1. MRF
2. Apollo Tyres

3.2 Details regarding major projects

a) National

Sl. No	Title of the Project	Duration	Funding Agency	Amount (Rs)
Prof. Sabu Thomas				
1.	Rod-coil type block copolymers and their composites as functional nanostructured materials for soft electronics	2016-2018 (3 Years)	DST-Kothari PDF	17,00,000
2.	Development of a magnetic field sensor based on multiferroic laminar composite	2016-2018 (3 Years)	DST-Kothari PDF	17,00,000
3.	Poly(lactic acid) nanocomposites for packaging applications	2015-2018 (3 Years)	DST-Kothari PDF	17,86,680
4.	Development of one-dimensional multi-ferroic nanocomposites for device applications	2016-2018 (2 Years)	KSCSTE	10,00,000

5.	Development of ZnO based solar cells sensitized by dyes and biological molecules	2015-2018 (2 years)	DST-Kothari PDF	20,00,000
6.	Polymer Quantum Dot aptamer hybrid conjugate for hepatocellular carcinoma cell imaging application	2015-2017 (2 years)	KSCSTE - PDF	9,44,800
7.	Size dependent antimicrobial activity and mode of action of nanoparticles emphasized with Ag nanoparticles against multiple drug resistant pathogens	2015-2018 (3 Years)	DST-Kothari PDF	20,16,000
8.	Novel thermoplastic elastomer composition for neutron shielding applications	2015 – 2017 (2 Years)	DAE, BRNS	34,66500
9.	Visvesvaraya PhD Scheme for Electronics and IT	2015-2020 (5 Years)	MeitY	89,77800
10.	Engineering biopolymeric twin skip patch (tsp) matrices for wound healing applications	2015-2018 (3 Years)	DST-Kothari PDF	17,00,000
11.	Hybrid nanocomposites of natural rubber/chlorobutyl rubber blends for automotive inner liners and inner tubes	2014-2016 (3 Years)	DST-Kothari PDF	18,20,930
12.	Engineering of nano-structured high performance epoxy/liquid rubber blends with controlled nanoparticle localisation	2014 – 2017 (3 Years)	CSIR	14,92,000
13.	Development of super tough Thermoset from self-assembled nanostructured block copolymer/epoxy resin blends	2014 – 2017 (3 Years)	DRDO	29,62,800
14.	Nanoscale Materials for water purification and fabrication of nano composites for Biomedical application	2016-2019 (3 Years)	Govt. of Kerala Plan fund 2015-16	1,00,00,000
15.	University-Industry Collaboration and Development of New Technologies	2015-2017	Govt. of Kerala Plan fund 2015-16	40,00,000
16.	Online course on Introduction to Nanoscience and Nanotechnology	2015-2017	Govt. of Kerala Plan fund 2015-16	50,00,000
17.	Miscibility, morphology and properties of NR/SBR and BR based binary and ternary rubber blends and the influence of carbon black and silica filler distribution on blend properties	2014 – 2017 (2.5Years)	MRF	3,00,000
18.	BT/PR-4800/INF/22/152/2012	2012-2017 (3 Years)	DBT-MSUB- IPLSARE	3,50,00,000
Dr.Nandakumar Kalarikkal				
19.	Design and applications of magnetically responsive self-assembled polymer nanocomposites	2016-2019 (3 Years)	DST Nano Mission	2,00,00,000
20.	Physics of Cavitation Bubbling and Hydrogen Generation during Liquid Phase	(2015-2017 Years)	BRFST-BRNS	34,96,576

	Laser Ablation			
21.	Development of one-dimensional multi-ferroic nanocomposites for device applications	2015 - 2017	KSCSTE	10,00,000
Dr.Raji V				
22.	AuNP/LDH core shell nanoparticles a novel multifunctional candidate for gene delivery	2016-2018 (2 Years)	KSCSTE	15,00,000
Total				4,31,02,286

b) International

Prof.Sabu Thomas

1.	Studies on cellulose nanocrystals and their applications in nanocomposites with varying technological applications	2014 – 2017 (3 Years)	DST (Indo-Brazil) International Bilateral co-operation	27,29,235
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1. Inter-institutional collaborative projects and associated grants received

a) National collaboration

	Project Title	Funding agencies	Total Fund (RS)
1.	DBT builder programme with School of Bio Sciences	DBT	4,50,00,000

b) International collaboration

SL No	Project Title	Funding agencies	Total Fund (RS)
1.	Extraction of cellulose nanocrystals from varying technical applications	DST (Indo-Brazil) International Bilateral co-operation	27,29,235
2.	Nano biomaterials for water purification	Researcher Links scheme offered within the Newton Fund, the British Council & Royal Society of Chemistry ,London	
3.	Crosslinked polyethylene nanocomposite for cable insulating application	University of Mara, Malaysia	

3.4 Details on research publications

Details on research publications: 87

1. **Boron doped graphene wrapped silver nanowires as an efficient electrocatalyst for molecular oxygen reduction** Nair, A. K., Kalarikkal, N., Thomas, S., Kala, M. S., Sahajwalla, V., Joshi, R. K., & Alwarappan, S. (2016).. *Scientific reports*, 6, 37731.
2. **Preparation, characterization and anti-colitis activity of curcumin-asafetida complex encapsulated in turmeric nanofiber** MSEC_2017_1834_R1
Journal: Materials Science & Engineering C(just accepted)
3. **Microbial Barrier Property and Blood Compatibility Studies of Electrospun Poly- ϵ -Caprolactone/Zinc Oxide Nanocomposite Scaffolds** Augustine, R., Kalarikkal, N., Thomas, S., Аугустин, Р., Калариккал, Н., & Томас, С. (2017).Journal of Siberian Federal University. Biology 2017 10(2): 226-236
4. **Gelatin modified lipid nanoparticles for anti retroviral drug delivery.**Joshy, K. S., Snigdha, S., Kalarikkal, N., Pothen, L. A., & Thomas, S. (2017) *Chemistry and Physics of Lipids*.
5. **Effect of nanostructured polyhedral oligomeric silsesquioxane on the physical properties of poly(vinyl alcohol).** Valiya Parambath, S., Ponnamma, D., Sadasivuni, K. K., Thomas, S. and Stephen, R. (2017), *J. Appl. Polym. Sci.*, 45447. doi: [10.1002/app.45447](https://doi.org/10.1002/app.45447)
6. **Tunable morphology and hydrophilicity to epoxy resin from copper oxide nanoparticles.** *Composites Science and Technology*.Sunny, A. T., Mozetic, M., Primc, G., Mathew, S., & Thomas, S. (2017)
7. **Biodegradable starch/PVOH/laponite RD-based bionanocomposite films coated with graphene oxide: Preparation and performance characterization for food packaging applications** Sharma, C., Manepalli, P. H., Thatte, A., Thomas, S., Kalarikkal, N., & Alavi, S. (2017).. *Colloid and Polymer Science*, 1-14.
8. **Elastomer/thermoplastic modified epoxy nanocomposites: The hybrid effect of ‘micro’and ‘nano’scale.** Puglia, D., Al-Maadeed, M. A. S., Kenny, J. M., & Thomas, S. (2017). *Materials Science and Engineering: R: Reports*, 116, 1-29.
9. **Morphology, transport characteristics and viscoelastic polymer chain confinement in nanocomposites based on thermoplastic potato starch and cellulose nanofibers from pineapple leaf.** Balakrishnan, P., Sreekala, M. S., Kunaver, M., Huskić, M., & Thomas, S. (2017). *Carbohydrate Polymers*.
10. **To What Extent Can Hyperelastic Models Make Sense the Effect of Clay Surface Treatment on the Mechanical Properties of Elastomeric Nanocomposites?**Paran, S. M. R., Saeb, M. R., Formela, K., Goodarzi, V., Vijayan, P., Puglia, D., ... & Thomas, S. (2017).. *Macromolecular Materials and Engineering*
11. **Natural Rubber Based Research and Developments in Indian Rubber Industry.**Thomas, S. (2017). *NIPPON GOMU KYOKAISHI*, 90(3), 72-76.
12. **Development of nanoscale morphology and role of viscoelastic phase separation on the properties of epoxy/recycled polyurethane blends** Reghunadhan, A., Datta, J., Kalarikkal, N., & Thomas, S. (2017).. *Polymer*, 117, 96-106.

13. **Effect of organoclay on the solvent diffusion behavior and mechanical properties of natural rubber nanocomposites.** Meera, A. P., Thomas, S., Zachariah, A. K., & Yang, W. (2017). *Polymer Composites*.
14. **Mechanism of phase separation in a weakly interacting system with strong dynamic asymmetry,** Chandran, C. S., Antolasic, F., Shanks, R. A., & Thomas, S. (2017).. *Journal of Applied Polymer Science*.
15. **A comprehensive study of surface modified graphene based polymer nanocomposites for multifunctional electronic applications.** Abraham, J., Arif, M., & Thomas, S. (2016, October). In *Young Researchers in Vacuum Micro/Nano Electronics (VMNE-YR)* (pp. 1-13). IEEE.
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17. **Polymer Sutures For Simultaneous Wound Healing And Drug Delivery-A Review.** Joseph, B., George, A., Gopi, S., Kalarikkal, N., & Thomas, S. (2017). *International Journal of Pharmaceutics*.
18. **Rigid Amorphous Phase: Mechanical and Transport Properties of Nitrile Rubber/Clay Nanocomposites** Thomasa, S., George, S. C., & Thomas, S. (2017).. *Progress in Rubber, Plastics and Recycling Technology*, 33(2), 103.
19. **Evaluation of Versatile CdS Nanomaterials Based Liquid Crystals Switchable Device.** Pal, K., Thomas, S., & Mohan, M. L. (2017). *Journal of Nanoscience and Nanotechnology*, 17(4), 2401-2412.
20. **UV protective poly (lactic acid)/rosin films for sustainable packaging.** Narayanan, M., Loganathan, S., Valapa, R. B., Thomas, S., & Varghese, T. O. (2017). *International Journal of Biological Macromolecules*, 99, 37-45.
21. **Preparation of a novel bioavailable curcuminoid formulation (Cureit™) using Polar-Nonpolar-Sandwich (PNS) technology and its characterization and applications** Amalraj, A., Jude, S., Varma, K., Jacob, J., Gopi, S., Oluwafemi, O. S., & Thomas, S. (2017).. *Materials Science and Engineering: C*, 75, 359-367.
22. **Transport behaviour of aromatic solvents through styrene butadiene rubber/poly [methyl methacrylate] (SBR/PMMMA) interpenetrating polymer network (IPN) membranes,** Jose J. George V., T., Pramoda K.P., Thomas S. Article reference: JPOL19559
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25. **Electrospun poly(vinylidene fluoride-trifluoroethylene)/zinc oxide nanocomposite tissue engineering scaffolds with enhanced cell adhesion and blood vessel formation** , Augustine R., Dan P., Sosnik A., Kalarikkal N., Tran N., Vincent B., Thomas S., Menu P., and Rouxel D., (2017). *Nano Research* , 10.1007/s12274-017-1549-8
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27. **Meldrums Acid Modified Cellulose Nanofiber-Based Polyvinylidene Fluoride Microfiltration Membrane for Dye Water Treatment and Nanoparticle Removal**, Gopakumar D. A., Pasquini, D., Henrique, M. A., Luis, de Moraes, C. Grohens Y. and Thomas, S.,(2017) *ACS sustainable chemistry and Engineering*, DOI: 10.1021/acssuschemeng.6b02952
28. **UV Protective Poly (lactic acid)/Rosin Films for Sustainable Packaging**. Narayanan, M., Loganathan, S., Valapa, R. B., Thomas, S., & Varghese, T. O. (2017). *International Journal of Biological Macromolecules*.
29. **Fabrication of graphene oxide and hyperbranched polyurethane composite via in situ polymerization with improved mechanical and dielectric properties** Yadav, S. K., Suri, A., Ansari, M. O., & Thomas, S. (2017)..*Polymer Composites*.
30. **Influence of n-type nickel ferrite in enhancing the AC conductivity of optimized polyaniline-nickel ferrite nanocomposite** Megha, R., Ravikiran, Y. T., Kumari, S. V., & Thomas, S. (2017). *Applied Physics A*, 123(4), 245.
31. **A high-performance BaTiO₃-grafted-GO-laden poly (ethylene oxide)-based membrane as an electrolyte for all-solid lithium-batteries**. Angulakshmi, N., Kar, G. P., Bose, S., Gowd, E. B., Thomas, S., & Stephan, A. M. (2017). *Materials Chemistry Frontiers*.
32. **Chitin nanowhisker (ChNW)-functionalized electrospun PVDF membrane for enhanced removal of Indigo carmine**. Gopi, S., Balakrishnan, P., Pius, A., & Thomas, S. (2017) *Carbohydrate Polymers*, 165, 115-122.
33. **Investigation into dielectric behaviour and electromagnetic interference shielding effectiveness of conducting styrene butadiene rubber composites containing ionic liquid modified MWCNT**. Abraham, J., Xavier, P., Bose, S., George, S. C., Kalarikkal, N., & Thomas, S. (2017). *Polymer*, 112, 102-115.
34. **Structural and Surface Compatibility Study of Modified Electrospun Poly(ϵ -caprolactone) (PCL) Composites for Skin Tissue Engineering**, Ghosal, K., Manakhov, A., Zajíčková, L., & Thomas, S. (2017).. *AAPS PharmSciTech*, 18(1), 156-165.
35. **Realization of Enhanced Magnetolectric Coupling and Raman Spectroscopic Signatures in 0-0 Type Hybrid Multiferroic Core-Shell Geometric Nanostructures**. Abraham, A. R., Raneesh, B., Woldu, T., Aškračić, S., Lazovic, S., Dohčević-Mitrović, Z. D., ... & Kalarikkal, N. (2017). *The Journal of Physical Chemistry C*.
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39. **Smart in-plane switching of nanowires embedded liquid crystal matrix**,K. Pala, H.J. Maria, S. Thomas, M.L.N.M. Mohan, (2017). *Organic Electronics*, 42, 256–268

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- 1. Revalorization of sunflower stalks as novel sources of cellulose nanofibrils and nanocrystals and their effect on wheat gluten bionanocomposite properties** Fortunati, E., F. Luzi, A. Jiménez, D. A. Gopakumar, D. Puglia, S. Thomas, J. M. Kenny, A. Chiralt, and L. Torre (2016). *Carbohydrate polymers* 149 (2016): 357-368.
- 2. Fabrication and characterization of biosilver nanoparticles loaded calcium pectinate nano-micro dual-porous antibacterial wound dressings** Augustine, R., Augustine, A., Kalarikkal, N., & Thomas, S. (2016).. *Progress in Biomaterials*, 5(3-4), 223-235.
- 3. Environmental Fate of Zinc Oxide Nanoparticles: Risks and Benefits.** Beegam, Asfina, Parvathy Prasad, Jiya Jose, Miguel Oliveira, Fernando G. Costa, Amadeu MVM Soares, Paula P. Gonçalves et al. (2016): "*TOXICOLOGY-NEW ASPECTS TO THIS SCIENTIFIC CONUNDRUM* 81.
- 4. Multiwalled carbon nanotubes@ octavinyl polyhedral oligomeric silsesquioxanes nanocomposite preparation via cross-linking reaction in acidic media.** Somasekharan, L., Thomas, S., Comoy, C., Sivasankarapillai, A., Kalarikkal, N., & Lamouroux, E. (2016). *Journal of Nanoparticle Research*, 18(11), 337.
- 5. Electrochemical studies on composite gel polymer electrolytes for lithium sulfur batteries** Natarajan, A., Stephan, A. M., Chan, C. H., Kalarikkal, N., & Thomas, S. (2016). s. *Journal of Applied Polymer Science*.
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- 10. Interfacial interactions of thermally reduced graphene in poly (trimethylene terephthalate)-epoxy resin based composites** Chandran, C. S., Czajka, M., Chan, C. H., Shanks, R. A., & Thomas, S. (2016).. *Polymer*.
- 11. Dynamic energy transfer in non-covalently functionalized reduced graphene oxide/silver nanoparticle hybrid (NF-RGO/Ag) with NF-RGO as the donor material** Oluwafemi, O. S., Thomas, S., & Kalarikkal, N.. *Journal of Materials Science: Materials in Electronics*, 1-9.
- 12. Tackling chemical etching and its mechanisms of polyphenolic composites in various reactive low temperature plasmas** Puliyalil, H., Filipič, G., Kovač, J., Mozetič, M., Thomas, S., & Cvelbar, U. (2016).. *RSC Advances*, 6(97), 95120-95128.
- 13. Microwave Absorption in MWNTs-Based Soft Composites Containing Nanocrystalline Particles as Magnetic Core and Intrinsically Conducting Polymer**

- as a **Conductive Layer** Bhingardive, V., Woldu, T., Biswas, S., Kar, G. P., Thomas, S., Kalarikkal, N., & Bose, S. (2016).. *ChemistrySelect*, 1(15), 4747-4752.
14. **Dynamic application of novel electro-optic switchable device modulation by graphene oxide dispersed liquid crystal cell assembling CdS nanowires.** Pal, K., Mohan, M. M., & Thomas, S. (2016). *Organic Electronics*, 39, 25-37.
 15. **Percolated network formation in biocidal 3D porous PCL/clay nanocomposite scaffolds: effect of organic modifier on interfacial and water sorption properties.** Elias, E., Zachariah, A. K., Kumar, V., Sunil, M. A., Bose, S., Souza, F. G., & Thomas, S. (2016). *RSC Advances*, 6(88), 85107-85116.
 16. **Solvent Assisted Rinsing: Stability/Instability of Ultrathin Polymer Residual Layer** Beena Unni, A., G. Vignaud, J. K. Bal, N. Delorme, T. Beuvier, S. Thomas, Y. Grohens, and A. Gibaud. (2016): *Macromolecules* 49, no. 5 1807-1815.
 17. **Contact Angle Studies in XLPE Hybrid Nanocomposites with Inorganic Nanofillers** Jose, J. P., Abraham, J., Maria, H. J., Varughese, K. T., & Thomas, S. (2016, August).. In *Macromolecular Symposia* (Vol. 366, No. 1, pp. 66-78).
 18. **Copper oxide nanoparticles in an epoxy network: microstructure, chain confinement and mechanical behaviour.** Sunny, A. T., Adhikari, R., Mathew, S., & Thomas, S. (2016). *Physical Chemistry Chemical Physics*, 18(29), 19655-19667.
 19. **Solvent Transport Characteristics of Thermoplastic Elastomer Blends Based on Nylon and NBR** Abraham, J., Muraleedharan, K., Radhesh Kumar, C., Thomas, S., & George, S. C. (2016).. *Polymer Engineering & Science*.
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 21. **Mechanical properties of polyphenylene oxide/talc composites with and without coupling agent** Rane, A. V., Kanny, K., Vayyaprontavida Kaliyathan, A., Joshi, S., & Thomas, S. (2016).. *Materials Research Innovations*, 1-6.
 22. **Studies on Dynamic Ageing Conditions for Life Cycle Prediction of Tyre Tread.** Abitha, V. K., Rane, A. V., Kanny, K., & Thomas, S.
 23. **Mechanisms of hydrophobization of polymeric composites etched in CF4 plasma.** Puliyalil, H., Recek, N., Filipič, G., Čekada, M., Jerman, I., Mozetič, M., ... & Cvelbar, U. (2016) *Surface and Interface Analysis*.
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 26. **Influence of temperature on the confinement effects of micro and nano level graphite filled poly (isoprene-co-isobutylene) composites.** Ponnamma, D., Saiter, A., Saiter, J. M., Thomas, S., Grohens, Y., AlMaadeed, M. A. A., & Sadasivuni, K. K. (2016). *Journal of Polymer Research*, 23(7), 1-8.

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30. **Characterization and Evaluation of Phenol Degrading Bacillus Spp. for Enhancing the Softness of Coir Fiber** Karthika, S., Reshma, M. J., Wilson, P. A., Das, R. A., Sarma, U. S., Harikrishnan, K., & Thomas, S. (2016).. *Journal of Natural Fibers*, 13(3), 253-260.
31. **Morphology and hydroscopic properties of acrylic/thermoplastic polyurethane core-shell electrospun micro/nano fibrous mats with tunable porosity.** Gopinathan, J., Indumathi, B., Thomas, S., & Bhattacharyya, A. (2016). *RSC Advances*, 6(59), 54286-54292.
32. **Tetragonal BaTiO₃ nanoparticles: An efficient photocatalyst for the degradation of organic pollutants.** Kappadan, S., Gebreab, T. W., Thomas, S., & Kalarikkal, N. (2016). *Materials Science in Semiconductor Processing*, 51, 42-47.
33. **Lanthanide nanoparticles encapsulated polymer hybrid capsules for bioimaging applications** Keziya James, Rakhimol K.R., Sri Sivakumar, Sabu Thomas, Raji V, Nandakumar Kalarikkal, (2016), [*Biotechnology International \(BTI\)*](#) 9.2
34. **Recent Trends in Polymer Processing and Characterization.** Abitha, V. K., Thomas, S., Kalarikkal, N., & Haponiuk, J. T. (2016), *Macromol. Symp.* 362. *Macromol. Symp.*, 362: 1. doi: 10.1002/masy.201670013
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38. **Gentamicin loaded electrospun poly (ε-caprolactone)/TiO₂ nanocomposite membranes with antibacterial property against Methicillin resistant Staphylococcus aureus (MRSA).** Augustine, R., George, S. C., Kalarikkal, N., & Thomas, S. (2016). *Polymer-Plastics Technology and Engineering*, (just-accepted).
39. **Developing highly conducting and mechanically durable styrene butadiene rubber composites with tailored microstructural properties by a green approach using ionic liquid modified MWCNTs.** Abraham, Jiji, Lekshmi Kailas, Nandakumar

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41. **Segmental dynamics, morphology and thermomechanical properties of electrospun poly (ϵ -caprolactone) nanofibers in the presence of an interacting filler.** Elias, Eldho, Nithin Chandran, Fernando G. Souza, and Sabu Thomas. *RSC Advances* 6, no. 26 (2016): 21376-21386.
42. **Completely green synthesis of silver nanoparticle decorated MWCNT and its antibacterial and catalytic properties.** Mohan, Sneha, Oluwatobi S. Oluwafemi, Sandile P. Songca, Didier Rouxel, Patrice Miska, Francis B. Lewu, Nandakumar Kalarikkal, and Sabu Thomas. *Pure and Applied Chemistry* 88, no. 1-2 (2016): 71-81.
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45. **Structural and Surface Compatibility Study of Modified Electrospun Poly (ϵ -caprolactone)(PCL) Composites for Skin Tissue Engineering.** Ghosal, Kajal, Anton Manakhov, Lenka Zajíčková, and Sabu Thomas. *AAPS PharmSciTech* (2016): 1-10.
46. **Styrene-Butadiene Rubber/Modified Ground Tire Rubber Blends Co-Vulcanization: Effect of Accelerator Type.** Formela, Krzysztof, Magdalena Formela, Sabu Thomas, and Józef Haponiuk. In *Macromolecular Symposia*, vol. 361, no. 1, pp. 64-72. 2016.
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3.7 No. of books published i) With ISBN No.

Books (12)

Book (<http://www.sabuthomas.com/books/>)

1.		Crystallization in Multiphase Polymer Systems 1st Edition;Editors: Sabu Thomas Mohammed Arif P. E. Bhoje Gowd Nandakumar Kalarikkal Paperback ISBN: 9780128094532 ;Imprint: Elsevier ‘Published Date: 12th September 2017 Page Count: 600
2.		Transport Properties of Polymeric Membranes 1st Edition;Editors: Sabu Thomas Runcy Wilson Anil Kumar S Soney George Paperback ISBN: 9780128098844 Imprint: Elsevier Published Date: 1st November 2017 Page Count: 600
3.		Clay-Polymer Nanocomposites Authors: Khoulood Jlassi, Mohamed Chehimi, Sabu Thomas Edition: 1st Edition First Published: 2017;Print: 978-0-323-46153-5 Read More
4.		Thermal and Rheological Measurement Techniques for Nanomaterials Characterization Editors: Sabu Thomas, Raju Thomas , Ajesh Zachariah;Edition: 1st Edition;First Published: 2017;Print: 978-0-323-46139-9; Read More
5.		Microscopy Methods in Nanomaterials Characterization Editors: Sabu Thomas, Raju Thomas , Ajesh Zachariah , Raghvendra Mishra -Read More Edition: 1st Edition;First Published: 2017;Print: 978-0-323-46141-2
6.		Spectroscopic Methods for Nanomaterials Characterization Editors: Sabu Thomas, Raju Thomas , Ajesh Zachariah , Raghvendra Mishra-Product Type: Book;Edition: 1st Edition;First Published: 2017;Print: 978-0-323-46140-5 Read More
7.		Polyurethane Polymers Composites and Nanocomposites Editors: Sabu Thomas Janusz Datta, Haponiuk Jozef, Arunima R;Edition: 1st Edition;First Published: 2017;Print: 978-0-12-804065-2 ; Read More
8.		Polyurethane Polymers Blends and Interpenetrating Polymer Networks;Edition: 1st Edition;First Published: 2017;Print: 978-0-12-804039-3;Editors: Sabu Thomas, Janusz Datta , Haponiuk Jozef , Arunima R Read More
9.		Progress in Rubber Nanocomposites; Editors: Sabu Thomas, Hanna Maria Edition: 1st Edition First Published: 2016;Print: 978-0-08-100409-8; eBook: 978-0-08-100428-9; Read More
10.		Spectroscopy of Polymer Nanocomposites;Editors: Sabu Thomas Didier Rouxel Deepalekshmi Ponnamma;Edition: 1st Edition;First Published: 2016;Print: 978-0-323-40183-8; eBook: 978-0-323-41391-6 Read More
11.		Printing on Polymers;Authors: Joanna Izdebska, Sabu Thomas;Edition: 1st Edition First Published: 2015;Print: 978-0-323-37468-2; eBook: 978-0-323-37500-9 Read More
12.		Design and Applications of Nano-structured Polymer Blends and Nano-composite Systems ;Edition: 1st Edition;First Published: 2015;Print: 978-0-323-39408-6; eBook: 978-0-323-39454-3;Editors: Sabu Thomas, Robert Shanks, Sarath Chandran Read More

Book chapters (17)

1. **Alkali Treatment to Improve Physical, Mechanical and Chemical Properties of Lignocellulosic Natural Fibers for Use in Various Applications.** *Lignocellulosic Biomass Production and Industrial Applications*, Manna, S., Saha, P., Chowdhury, S., Thomas, S., & Sharma, V. (2017). 47-63.
2. **Methods for Extraction of Nanocellulose from Various Sources** Kargarzadeh, H., Ioelovich, M., Ahmad, I., Thomas, S., & Dufresne, A. (2017).. *Handbook of Nanocellulose and Cellulose Nanocomposites*, 1-49.
3. **Rheology and Processing of Inorganic Nanomaterials and Quantum Dots/Polymer Nanocomposites.** , Mohan, S., Abraham, J., Oluwafemi, O. S., Kalarikkal, N., & Thomas, S. *Rheology and Processing of Polymer Nanocomposites* (2016). 355-382.
4. **Multilayer Bottles.** In *Multicomponent Polymeric Materials* Vasudeo, R. A., Ajitha, A. R., Patil, S. S., Kanny, K., & Thomas, S. (2016). (pp. 325-348). Springer Netherlands.
5. **Multilayer Polymer Films.** In *Multicomponent Polymeric Materials* Ajitha, A. R., Aswathi, M. K., Maria, H. J., Izdebska, J., & Thomas, S. (2016). (pp. 229-258). Springer Netherlands.
6. **Interfacial Compatibilization of Multilayered Products.** Abitha, V. K., Priya, S. L., Jadhav, S., & Thomas, S. (2016) In *Multicomponent Polymeric Materials* (pp. 369-381). Springer Netherlands.
7. **Multilayer Nanowires and Miscellaneous Multilayer Products.** In *Multicomponent Polymeric Materials* Ajitha, A. R., Sari, P. S., Maria, H. J., & Thomas, S. (2016). (pp. 383-410). Springer Netherlands.
8. **Polymer Films for Packaging.** In *Encyclopedia of Polymeric Nanomaterials* (pp. 1-8). Balakrishnan, P., Thomas, M. S., Pothen, L. A., Thomas, S., & Sreekala, M. S. (2014). Springer Berlin Heidelberg DOI: 10.1007/978-3-642-36199-9_406
9. **Starch based biocomposites.** *Green Polymer Composites Technology: Properties and Application*, Balakrishnan, P., Thomas, S., & Sreekala M.S., (2015). <https://www.crcpress.com/Green-Polymer-Composites-Technology-Properties-and-Applications/Inamuddin/> Vol 1, ISBN: 9781498715461 | 149871546X, published by CRC Press, USA.
10. **Natural fibre and polymer matrix composites and their applications in aerospace engineering.** Balakrishnan, P., M. J. John, L. Pothen, M. S. Sreekala, and S. Thomas. *Advanced Composite Materials for Aerospace Engineering: Processing, Properties and Applications* (2016): 365. <http://dx.doi.org/10.1016/B978-0-08-100037-3.00012-2>
11. **Nanomedicine: From Concept To Reality.** Rakhimol, Kr, Robin Augustine, Sabu Thomas, And Nandakumar Kalarikkal *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 1.
12. **Tissue Engineering: Principles, Recent Trends And The Future,** Mathew, Ansuja P., Robin Augustine, Nandakumar Kalarikkal, And Sabu Thomas. *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 31.
13. **Electrospun Matrices For Biomedical Applications: Recent Advances.** Mohanan, Deepa P., Robin Augustine, Nandakumar Kalarikkal, Ek Radhakrishnan, And Sabu Thomas *Nanomedicine and Tissue Engineering: State of the Art and Recent Trends* (2016): 365.

14. **Diffusion, transport, and barrier properties of IPNS**, Wilson, Runcy, S. Anil Kumar, Miran Mozetič, Uroš Cvelbar, and Sabu Thomas.. "*Micro-and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications* (2016): 319.
15. **Micro and nano-structured interpenetrating polymer networks: state of the art, new challenges, and opportunities**. James, Jose, George V. Thomas, H. Akhina, and Sabu Thomas. *Micro-and Nano-Structured Interpenetrating Polymer Networks: From Design to Applications* (2016): 1
16. **Biodegradable green Composites**. Gopi, Sreerag, Anitha Pius, and Sabu Thomas *Biodegradable Green Composites* (2016): 1.
17. **Biomedical Applications of Polyolefins**. Joshy, K. S., Pothan, L. A., & Thomas, S. (2016).. In *Polyolefin Compounds and Materials* (pp. 247-264). Springer International Publishing.
18. **Recycling of Polyolefin Materials**. PS Sari, T Sharika, K Bicy, S Thomas, In *Polyolefin Compounds and Materials* (pp. 315-339). Springer International Publishing.
19. **Polyolefins in Automotive Industry**. CJ Chirayil, J Joy, HJ Maria, I Krupa, S Thomas, In *Polyolefin Compounds and Materials* (pp. 265-283). Springer International Publishing,
20. **Recycling of Polyolefin Materials** Sari, P. S., Sharika, T., Bicy, K., & Thomas, S. (2016) In *Polyolefin Compounds and Materials* (pp. 315-339). Springer International Publishing.
21. **Natural Polyisoprene Composites and Their Electronic Applications** Ponnamma, D., Sadasivuni, K. K., Varughese, K. T., Thomas, S., & AlMa'adeed, M. A. A. (2016). In *Flexible and Stretchable Electronic Composites* (pp. 1-35). Springer International Publishing.
22. **Adhesion and Surface Issues in Biocomposites and Bionanocomposites** Jose, C., Thomas, M. S., Deepa, B., Pothan, L. A., & Thomas, S. (2015).. *Progress in Adhesion and Adhesives*, 169-217
23. **Biological Delignification Of Biomass** Joy, J., Jose, C., Mathew, P. L., Thomas, S., & Khalaf, M. N. (2015).. *Green Polymers and Environmental Pollution Control*, 271.
24. **Electronic Applications of Styrene–Butadiene Rubber and Its Composites** Stephen, R., & Thomas, S. (2016). In *Flexible and Stretchable Electronic Composites* (pp. 261-277). Springer International Publishing.
25. **Polyuronates And Their Application In Drug Delivery And Cosmetics** Augustine, R., Bhavanavenugopal, S. S., Kalarikkal, N., & Thomas, S. (2015).. *Green Polymers and Environmental Pollution Control*, 239.
26. **Natural Polyisoprene Composites and Their Electronic Applications**. In *Flexible and Stretchable Electronic Composites* (pp. 1-35). Ponnamma, D., Sadasivuni, K. K., Varughese, K. T., Thomas, S., & AlMa'adeed, M. A. A. (2016). Springer International Publishing.

3.11 No. of conferences

International Conference Organised in 2015-2016

No. of conferences: 06

2017

1. Second International Conference on Advanced Polymeric Materials (ICAPM 2017) 7-9 April 2017
2. International Meeting on Highly Correlated Systems (IMHCS), 24-26 March 2017
3. Fourth International Conference on Nanostructured Materials and Nanocomposites (ICNM 2017) 10-12 February 2017

2016

1. International Conference on Polymer Processing and Characterization (ICPPC 2016), 9-11, December 2016
2. Second International Conference on Advanced Materials for Power Engineering(ICAMPE 2016) : 11-13, November 2016
3. Fourth International Conference on Nanomedicine and Tissue Engineering (ICNT 2016) : 12-14 August 2016
4. International Conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Application (ICM 2016): 13-15, May 2016

3.12 No. of faculty served as experts, chairpersons or resource persons:2

Membership in Professional Bodies:

- Member of American Chemical Society (Rubber Division)
- Royal Society of Chemistry (Membership number: 473990)
- Honorable member of IMTCE Loyalty Award Club (Membership Number -IMTCE-LC-017)
- Member of Indian Membrane Society
- Member of Polymer Society of India
- Member of Society of Disordered Materials
- Member of Society of Polymer Technologists, University of Cochin
- Member of Mahatma Gandhi University, Chemical Society
- Fellow of New York Academy of Sciences, USA.
- Actively engaged in the People's Science Movement for the Popularization of science to villages and rural areas

Reviewer for International Refereed Journals:

- 1) Journal of the American Chemical Society,
- 2) Macromolecules
- 3) Journal of Applied Polymer Science
- 4) Composites Science and Technology
- 5) Journal of Thermal Analysis
- 6) Polymers and Polymer Composites
- 7) Polymer
- 8) Soft Matter
- 9) Journal. of Polymer Science Part B: Polymer Physics
- 10) Composites Part A & Part B
- 11) Polymer Composites
- 12) Polymer Engineering and Science
- 13) European Polymer Journal
- 14) Journal of Materials Science
- 15) Langmuir
- 16) Applied Clay Science
- 17) RSC advances
- 18) Biomacromolecules
- 19) Industrial crops and products

Academic Referee for Universities and Funding Agencies:

1. University of Sains, Malaysia
2. University of Calcutta, Calcutta, India
3. University of Rajasthan, Jaipur, India
4. DST, India
5. DBT, India
6. CSIR, India

Editorial board membership

1. SM Journal of Nanotechnology and Nanomedicine
2. Nano Advances
3. Materials Science and Engineering (Editorial Key Reviewers Committee)
4. International Journal Of Advances In Engineering Research
5. World Journal of Biotechnology
6. Journal of Emerging Materials Technology
7. Associate Editor, Bulletin of Materials Science
8. Regional Editor - "Current Smart Materials".

9. Editor in-Chief of Editorial Board-International Journal of Science World (IJSW)
10. Editorial Member -Flat Chem, Elsevier.
11. International Advisory Board (IAB) for the Springer Nature, Book Series “Gels Horizons: From Science to Smart Materials”
12. Editorial Review Board Member - International Journal of Surface Engineering and Interdisciplinary Materials Science
13. Editorial Member - Journal of Molecular and Applied Bioanalysis
14. Editor for the Journal “Nano-Structures & Nano-Objects”. Elsevier /Global STM Journals
15. Editorial Board Member for the “Journal of Powder Metallurgy &Mining”
16. Editorial Board Member for the Acta Materialia Turcica (ActaMAT).
17. Editorial Board Member for- SciFed Journal of Petroleum

3.18 No. of faculty from the Institution
 who are Ph. D. Guides
 and students registered under them

3.19 No. of Ph.D. awarded by faculty from the Institution

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF	10	SRF	5	Project Fellows	5	Any other	PDF: 12
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3.21 No. of students Participated in NSS events:

University level	NA	State level	NA
National level	NA	International level	NA

3.22 No. of students participated in NCC events:

University level	NA	State level	NA
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National level International level

3.23 No. of Awards won in NSS:

National level International State level

3.24 No. of Awards won in NCC:

National level International level State level

3.25 No. of Extension activities organized

University forum College forum
 NCC NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

Our Erudite Professor, Prof. Carlo Montimagno visited and interacted with students of K. E School, Mannanam

Faculty and Research students of IIUCNN planted more than 50 trees on June 5th (Environmental day) in the campus.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

2016-2017			
1	Ballmilling Equipment	1	Rs.2,48,000/-
2	Low Temperature furnace	1	Rs.2,50,000 /--
3	Analytical Balance with Density kit	1	Rs. 100990/-
4	Magnetic Stirrer with leading and	1.	Rs. 55490/-

	electronics contact Thermometer		
5	Hot Air Oven	1	Rs. 98500/-

4.2 Computerization of administration and library

21 Books were purchased during this time

4.3 Library services:

	Existing		Newly added	
	No.	Value	No.	Value
Text Books	410	1,50,342	21	1,50,342

4.4 Technology up gradation (overall)

Three computers were purchased during this time for the students

4.5 Computer, Internet access, training to teachers and students and any other programme for technology

Upgradation (Networking, e-Governance etc.)

- In IIUCNN, well equipped computer labs with high speed internet access for the students were established in this period. All faculties have high speed internet facility (100mbps bandwidth). These are strictly monitored by network administrators to prevent inappropriate use and prevent chances of digital hacking. The faculty and students in the schools are benefitted from the training and orientation programmes conducted by the University in advanced computer/software management from the experts in the field.
- The departments have corporate license software with the Micro soft. All the software loaded has been licensed with different agencies.

Name of the software	Licensed by
Microsoft Windows	Microsoft Corporation - Corporate version
Microsoft Office	Microsoft Corporation – Corporate Version
LINUX	Open source software
Anti - virus software	Purchased

- Scanner, print facility and Xerox facilities are available to the students and the faculty.

4.6 Amount spent on maintenance in lakhs:

i) ICT	Nil
ii) Campus Infrastructure and facilities	Nil
iii) Equipments	Rs 6, 57,352
iv) Others	Nil

Total : Rs 6, 57,352

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

Students monitoring- The mentor shall counsel the students during the periodic review meeting .The well behaved students shall be appreciated and others shall be properly cared for and counselled. The mentor shall encourage the student to develop and channelize his/her skills and talents through an appropriate forum such as conferences/workshops/seminars. Group mails are created by faculty members and

students to facilitate online mentoring. Meetings are conducted with the staff and students to address every issue that needs attention.

5.2 Efforts made by the institution for tracking the progression

- Various steps are taken to monitor and record the progress of students and researchers in their academic activities, like internal assessment and external examinations, assignments, dissertation etc.
- Slow and advanced learners are identified through the internal evaluation. In addition to the regular working hours, extra time has been given to the students to use the laboratory facilities to enhance their knowledge in the subjects not included in the curriculum.
- Facilities are provided to the students for the timely submission of thesis.
- **Available support services to overseas students-**
 1. International Hostel with international menu and dining facilities.
 2. Transport facilities for official visits to local area etc
 3. Special medical care is provided
 4. Registration of Visa at the time of arrival
 5. Visa extension if required for academic purpose
 6. No Objection Certificate at the time of leaving India after completion of course
- IIUCNN has arranged several invited lectures during 2015-2016

- Provided facilities for the students from other institutes to carry out their MSc. Dissertation works. Details are given below.

S.No	NAME	UNIVERSITY
1	Amrithalakshmi A.S.	Sree Narayana College, Nattika, Thrissur
2	Krishna T.U.	Sree Narayana College,

		Chengannur, Alapuzha.
3	Athulya N.P.	Sree Narayana College, Nattika, Thrissur
4	Nikhitha E. Valsan	Sree Narayana College, Nattika, Thrissur
5	Beillard Lucie	France
6	Quemere Jade	France
7	Saffar Florence	France
8	Nikhil Raveendran	University of Madras, Chennai.
9	Sujith S. Nair	University of Madras, Chennai.
10	SantraSanthosh	Indian Institute of Science education and Research, Trivandrum
11	Krishnapriya H.N	University of Madras, Chennai.
12	OleeviyaMerinReji	University of Madras, Chennai.
13	Krishna M. Bhaskar	AmritaVishwaVidyapeetham, Kollam
14	Swathi Krishna S.	AmritaVishwaVidyapeetham, Kollam
15	Aiswarya Anil	AmritaVishwaVidyapeetham, Kollam
16	Mrudula P.V.	Vimala College, Trissur
17	Anitha Mathew	Vimala College, Trissur

18	Ruthusree S.	SRM University, Tamilnadu
19	Krishna S. Nair	Amrita VishwaVidyapeetham, Kollam
20	Navya Suresh	Vimala College, Trissur
21	Sindhya P.NewDelhi	
22	ArchanaJohnyAlphonsa	College, pala

Details of Our Integrated PhD students doing their internship out side

Professors	Institutes	Student
1.A.Sigov/E.D.Mishina 2.Prof. Dr. Manfred Stamm	1. MIREA ,Moscow Technical University, Moscow, Russia 2.Physikalische Chemie und Physik der Polymere Leibniz-Institut fuer Polymerforschung Dresden e.V. (IPF) Hohe Strasse 6 01069 Dresden, Germany e-mail stamm@ipfdd.de Tel. (49) 351 4658 492 Fax (49) 351 4658 281 internet www.ipfdd.de	Yadu Nath V K Neelakandan M S
Dr. Jayachandran Kizhakkedath	Center for Blood Research and Department of Pathology & Laboratory Medicine University of British Columbia, Vancouver BC, Canada V6T 1Z3	Snehamol Mathew
Tianduo Li	Professor of Polymer Science Key Lab. of Fine Chemicals(Shandong Province) Dean of The School of Chemistry & Pharmaceutical Engineering Qilu University of Technology Jinan 250353, China Tel: (86)-531-89631207 Fax: (86)-531-89631208 Email:ylpt6296@vip.163.com	Nitheesha Shaji Karthika M
Zwe-Ling Kong Richard, Ph. D.	Professor, Cellular Immunology Laboratory, Dept. Food science. National Taiwan Ocean University. 2- Pei-Ning Road, Keelung20224, Taiwan MSN/E-mail: kongzl@mail.ntou.edu.tw	Athira Johnson
Ana Senos	Associate Professor	

	Dep. Materials and Ceramics Engineering/ CICECO University of Aveiro 3810-193 Portugal e-mail: anamor@ua.pt T: 00351234370257	Bilahari Aryat Sunija S
Prof.Maria De Lourdes Pereira	Ciceco, Department of Biology Aveiro university Portugal Invoice Prof.Maria De Lourdes Pereira University of Aveiro, CICECO-Aveiro Institute of Materials, Secretaria – sala 29.3.39, Campus Universitário Santiago 3810-193 Portugal NIF: 501461108 mlourdespereira@ua.pt 00351234370770	Parvathy Prasad Asfina Beegum
Dr. Ulrich Scheler	Leibniz-Institut für Polymerforschung Dresden e.V. Hohe Strasse 6 D-01069 Dresden, Germany phone +49 351 4658 275 fax +49 351 4658 231 www.ipfdd.de	Aswathi Vasudevan

(c) No. of international students

6

1. **Olaoluwa Obisesan, Obafemi Awolowo university, Ille-Ife Osun State,Nigeria.**
2. Elaheh allahYari, Plasma Physiscs research center, University Tehrane,Iran
- 3.Jade Quemere IUT de Cretein Vitry (UPEC), university of CRETEIL, France.
4. Lucie BeillardIUT de Cretein Vitry (UPEC), university of CRETEIL, France.
5. Sothearith Rom, IUT de Cretein Vitry (UPEC), university of CRETEIL, France.
6. Florence saffar IUT de Cretein Vitry (UPEC), university of CRETEIL, France.

7.1 Innovations introduced during this academic year which have created a positive impact on the Functioning of the institution Give details.

Facilitating faculty participation/ Budget allocation for research. Research fellowship for students / Providing infrastructure facilities. Establishment of a research committee / Providing

application forms for major/minor projects/ Special opportunities for students and staff for enhancement of research activities

ADVANCED CENTRE FOR ENVIRONMENTAL STUDIES AND SUSTAINABLE DEVELOPMENT

3.4. Details of research publications

Peer review Journals

1. Narayanan, S.P., Sathrumithra, S., Christopher, G. and Julka, J.M. New species and new records of earthworms of the genus *Drawida* from Kerala part of the Western Ghats biodiversity hotspot, India (Oligochaeta, Moniligastridae). *ZooKeys* 691: 1-18. 2017.
2. Manoj P. Rayaroth, Chung-Seop Lee, Usha K. Aravind, Charuvila T. Aravindakumar, Yoon-Seok Chang, Oxidative degradation of benzoic acid using Fe^0 - and sulfidized Fe^0 -activated persulfate: A comparative study *Chem. Eng. J.* 315, 426–436. 2017.
3. Sijumon Velachimangalam A., Aravind Usha K., and Aravindakumar Charuvila T, Degradation of Amaranth Dye Using Zero Valent Iron Nanoparticles: Optimal Conditions and Mechanism. *Environmental Engineering Science.* 34(5): 376-383. 2017.
4. Jissy Mathew, Akhil Gopalakrishnan, Charuvila T. Aravindakumar, and Usha K. Aravind, Transport properties and morphology of CHI/PSS multilayered microfiltration membranes for the low pressure filtration of amino acids, *J. Chem. Technol. Biotechnol.*, 92, 834-844. 2017.
5. Kaurwar, A., Satankar, R., Gupta, S., Aravind, U.K., Kothari, K., Soboyejo, A. and Plappally, A. 'Functional Demarcation of Traditional Off-White Colored Water Pots Manufactured from Rajasthan Clayey Soils and Red Colored Water Pots from Gujarat Clayey Soils Using Spectrographic, Cooling and Strength Studies--A Case Study from Jodhpur, Rajasthan, India', *MRS Advances*, , pp. 1–6. 2017.
6. Manoj P. Rayaroth, Usha K. Aravind, Charuvila T. Aravindakumar, Role of in-situ nitrite ion formation on the sonochemical transformation of para-aminosalicylic acid, *Ultrason. Sonochem.* 2017, DOI: 10.1016/j.ultsonch.2017.06.031

7. Shanthi Prabha V, Sreekanth N.P, Babu Padma Kumar, A.P Thomas, Characterization Of Selected Biochars To Determine Their Suitability As A Soil Amendment From A Climate Change Mitigation Perspective , Oct. Jour. Env. Res. Vol. 5(1): 053-063. 2017.
8. Narayanan, S.P., Sathrumithra, S., Christopher, G., Thomas, A.P. and Julka, J.M. Current distribution of the invasive earthworm *Pontoscolex corethrurus* (Müller, 1857) after a century of its first report from Kerala state, India. *Opuscula Zoologica Budapest*, 47(1), 101–107. 2016.
9. Narayanan, S.P., Sathrumithra, S., Kuriakose, D., Christopher, G., Thomas, A.P. and Julka, J.M. Are exotics *Amyntas alexandri* (Beddard, 1900) and *Metaphire peguana* (Rosa, 1890) (Clitellata: Oligochaeta: Megascolecidae) a threat to native earthworms in Kerala, India? *Journal of Threatened Taxa*, 8(2): 8938–8942. 2016.
10. Narayanan, S.P., Sathrumithra, S., Kuriakose, D., Christopher, G., Thomas, A.P. and Julka, J.M.. Checklist of the earthworms (Oligochaeta) of Kerala, a constituent of Western Ghats biodiversity hotspot, India. *Zootaxa*, 4193(1): 117–137. 2016
11. Narayanan, S.P., and Thomas, A.P. Feeding rate and diet of the near threatened Oriental darter *Anhinga melanogaster* in Kuttanad wetlands of Kerala, India. *Journal of Global Biosciences*, 5(1): 3450-3460. 2016.
12. Narayanan, S.P., Kumar, V.P., Al Badush, A., Jayamohan, S., Jinesh, P.S., Sreekumar, B. and Thomas, A.P. First record of Spotted Crake *Porzana porzana* from Kerala, India. *Indian BIRDS* 11 (2): 48049. 2016.
13. Padma, P., Ramasamy, E.V., Muralivallabhan, T.V., Thomas, A.P. Changing scenario of household consumption pattern in Kerala: an emerging consumer state of India. *Soc.Indic. Res.* DOI 10.1007/s11205-016-1518-8. 2016.
14. Manoj P. Rayaroth, Usha K. Aravind, Charuvila T. Aravindakumar, Degradation of pharmaceutically active compounds by ultrasound based advanced oxidation process: A review, *Env. Chem. Lett.*, 14, 259-290. 2016.
15. Sunil Paul M., Sreekanth R. Nair, PramodGopinathan,Usha K. Aravind, and C. T. Aravindakumar, Transformation Reactions of Radicals from the Oxidation of Diphenhydramine: Pulse Radiolysis and Mass Spectrometric Studies, *Chemistry Select*, 1 (5), 924-933.2016.

16. M. P. Rayaroth, U. K. Aravind, C. T. Aravindakumar, Ultrasound based AOP for emerging pollutants: From degradation to mechanism, *Environ. Sci. Pollut. Res.* 14:259–290, 2016.

Conference Proceedings

International

1. P.R. Manoj, Usha K. Aravind, C.T. Aravindakumar. Impact of inorganic ions on the sonochemical degradation of triphenylmethane dyes. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
2. Jain maria Thomas, Vishnu N.R., C.T. aravindakumar, Usha K. Aravind. Polyelectrolyte functional bilayers for the removal of model emerging contaminants. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
3. Nikhil Chandra P., C.T. Aravindakumar, Usha K. Aravind. Fabrication of chitosan (styrene sulfonic acid) multilayer functionalized with humic acid and cholesterol for the removal of Cd (II) from aqueous solutions. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
4. Athulya M.K., Dineep D., Mary Lidiya Mathew, C.T. Aravindakumar, U.K. Aravind. Identification and removal of surfactants from grey water. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
5. D. Dineep. K. Usha, C.T. Aravindakumar. Sunlight induced photo transformation of labetalol in natural conditions. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
6. Subha S., Manoj P.R., C.T. Aravindakumar, U.K. Aravind. Determination of physico-chemical parameters and surface active agents in water matrix from a selected area in north Kuttanadu, Kerala, India. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
7. K.K. Nejumal, D.Dineep, P.R. Manoj, U.K. Aravind, C.T. Aravindakumar. Sonochemical degradation of Bisphenol S in aqueous medium. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
8. K.K. Nejumal, D.Dineep, Aneesh danam, C.T. aravindakumar, U.K. Aravind. Screening of glyphosphate and its metabolite in sediment samples of a selected backwater canal of

- Kottayam district, Kerala using UPLC-Q-ToF-MS. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
9. P.R. Manoj, Chung Seop Lee, Usha K. Aravind, C.T. Aravindakumar, Yoon seok Chang. Effect of ligands on the activity of nFe/FeS activated persulfate for the oxidative degradation of water pollutants. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
 10. Jeeva M. Philip, dineep D., Usha K. Aravind, C.T. Aravindakumar. Occurance of emerging contaminats in a conventional drinking water treatment plant. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
 11. C.S. shalumon, K. Usha, C.T. Aravindakumar. Spatial distribution and toxicological profile of Uranium (U) in drinking water sources of 4 different district of Kerala, India. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
 12. John Richard Thomas, Usha K. aravind, C.T. Aravindakumar. Seasonal variation of chemical composition of rain water in a rural location in Kerala, India. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
 13. Jisha C., Usha K. Aravind, P.T. Nguyen, C.T. Aravindakumar. Mass spectrometric fragmentation of nitenpyram: the complete gas phase ion chemistry and an illustarion of solvent effect on the ESI-MS. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.
 14. Misha T. Elias, Jisha C., C.T. Aravindakumar, Usha K. Aravind. Multistage mass spectrometric analysis of histamine H2 receptor antagonist, Cimetidine. International conference on water, from pollution to purification, ICW, Kottayam, India, , December 12-15, 2016.

National Conference papers

1. Babu Padmakumar, N.P.Sreekanth, V.Shanthi Prabha, Joby Paul, K.Sreedharan, M.Rameshan, V.Arun Babu, K.Rahul, Mahesh Mohan, V.P Sylas, E.V Ramasamy, A.P Thomas. Role of tree outside forest (tof) in climate change mitigation - a case study from thodupuzha urban region of Idukki district in Kerala. 29th Kerala Science Congress held at Mar Thoma College, Thiruvalla., 28-30 January 2017.

2. P.Padma, E.V.Ramasamy, T.V Muralivallabhan, A.P.Thomas, 'Increasing trend of consumer expenditure in Kerala – a micro visualization', 29th session of Kerala Science Congress, Mar Thoma college, thiruvalla, Kerala, 28th – 30th January 2017.
3. Narayanan, S.P., Sathrumithra, S., Christopher, G., Thomas, A.P.and Julka, J.M. 2016. Earthworm (Oligochaeta: Megadrile) fauna of Kuttanad wetlands in the Alappuzha district, Kerala, India. In: Environmental issues a factual profile. SERB sponsored two day national seminar Department of Botany and Department of Zoology, Sree Vidyadhi Raja NSS College, Vazhoor, Kottayam. - 3rd and 4th February 2016.
4. Babu Padmakumar, N.P.Sreekanth, V.Shanthi Prabha, Joby Paul, K. Sreedharan, M.Rameshan, V.Arun Babu, Mahesh Mohan, V.P. Sylas, E.V Ramasamy, A.P Thomas. Home garden and carbon stock estimation – A case study from thodupuzha municipality of Idukki district in Kerala. 28th Kerala Science Congress, 2739-2741, January 2016.

3.11 Conferences

1. International Conference on Water: from pollution to purification (ICW – 2016) Dec. 12-15, 2016, Kottayam, Kerala.

3.13. Collaborations

International

1. Duke University, U.S.A
2. Plymouth State University, U.S.A
3. Technical University of Denmark (DTU)]
4. Ben-Gurion University, Israel)

National

- 1.IIT Jodhpur
- 2.Shoolini University, Himachal Pradesh

INTER UNIVERSITY CENTRE FOR BIO MEDICAL RESEARCH& SUPER SPECIALITY

Publications from IUCBR&SSH

1. Nthenge-Ngumbau DN, Mohanakumar KP. (2017) Can cyclic nucleotide phosphodiesterase inhibitors be drugs for Parkinson's disease? *Mol Neurobiol.* Jan 6. doi: 10.1007/s12035-016-0355-8. (IF: 6.190)
2. Dutta D, Ali N, Banerjee E, *et al.* (2017) Low Levels of Prohibitin in Substantia Nigra Makes Dopaminergic Neurons Vulnerable in Parkinson's Disease. *Mol Neurobiol.* Jan 6. doi: 10.1007/s12035-016-0328-y. (IF: 6.190)
3. Verma P, Singh A, Nthenge-Ngumbau DN, *et al.*, (2016) Attention deficit-hyperactivity disorder suffers from mitochondrial dysfunction. *BBA Clin.* 6:153-158. (Cite Score - 1.750)
4. Sengupta T, Vinayagam J, *et al.*, (2016) Plant-Derived Natural Products for Parkinson's Disease Therapy. *Adv Neurobiol*;12:415-96. (Book Chapter)
5. Singh A, Verma P, *et al.*, (2016) Nimodipine, an L-type calcium channel blocker attenuates mitochondrial dysfunctions to protect against 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-induced Parkinsonism in mice. *Neurochem Int.* 99:221-32. (IF: 3.385)
6. Chakrabarti S, Mohanakumar KP. (2016) Aging and neurodegeneration: A tangle of models and mechanisms. *Aging Dis.* 7(2):111-3. (IF: 4.648)
7. Williams RJ, Mohanakumar KP, Beart PM. (2016) Neuro-nutraceuticals: Further insights into their promise for brain health. *Neurochem Int.* 95:1-3 (IF: 3.385)
8. Kalathottukaren MT, Srinivas A, Yu K, Shenoi RA, *et al.* A polymer therapeutic having universal heparin reversal activity: molecular design and functional mechanism. *Biomacromolecules* (2017). (In Press) (IF: 5.246)
9. Wong NKY, Shenoi RA, Abbina S, *al.*, Non-transformed and cancer cells can utilize different endocytic pathways to internalize dendritic polymer nanoparticle variants: implications on nanocarrier design. *Biomacromolecules* 18, 2427-2438 (2017) (IF: 5.246)
10. Kalathottukaren MT, Abraham L, Kapopara PK, *et al.*, Alteration of blood clotting and lung damage by protamine are avoided using the heparin and polyphosphate inhibitor, UHRA. *Blood* 129, 1368-1379 (2017) (IF: 13.164)

Special Issues of Journals Edited from IUCBR&SSH

1. S Chakrabarti, KP. Mohanakumar. Special Issue: Aging and neurodegeneration: A tangle of models and mechanisms. *Aging and Disease*, Volume 7 (Issue 2), Pages 111-235, June 2016. [IF 4.648]; ISSN 2152-5250
2. RJ. Williams, KP. Mohanakumar, PM. Beart. Special Issue: Neuro-nutraceuticals: Further insight into their promise for brain health. *Neurochemistry International*, Volume 95, Pages, 1-118, May 2016. [IF 3.385]; ISSN 0197-0186

Conferences and Workshops Organised

National

NFAB at the occasion of the World Day of the Elderly; 27-28 Sept 2016, RGCB Auditorium, Trivandrum.

NeuroUpdate 2017, CSIR-IICB, Nov 26, 2016 (One-Day Workshop annually organized between Neurologists and Neuroscientists)

International

Neurocon 2017, Golden Retreat, Haldia, January, 18-22, 2017 (Ageing & Disease, IF 4.648; Special Issue will be published during 2018)

Editorial Efforts from IUCBR&SSH

- Journal of Neurochemistry (Handling Editor), John Wiley & Sons
- Neurochemistry International, Elsevier Press
- Neurochemical Research, Springer-Nature
- Anatomy and Cell Biology; Korean Anatomical Society (<http://www.acbjournal.com>)
- Neuroscience & Medicine; www.scirp.org/journal/nm
- Journal of Cell & Tissue Research (Editor); <http://tcrjournals.com>

NFAB 2016 - World Day of the Elderly RGCB Auditorium, Thiruvananthapuram



Launch of the International Journal 'Brain, Mind & Consciousness'



INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES

Details of Programms organised



Two Days Training Programme
on

DISABILITY INCLUSIVE DISASTER RISK MANAGEMENT

From 17th - 18th May 2017

Jointly Organized by
INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES (IUCDS),
Mahatma Gandhi University, Kottayam &
KERALA STATE DISASTER MANAGEMENT AUTHORITY (KSDMA), Thiruvananthapuram

Venue: Seminar Hall, School of Computer Sciences

CONTACT

Paper presentations : Ms. Hena N N, Lecturer, IUCDS, Ph. 9846735917
Registration : Ms. Rincy Joseph, Director, Alan T21 Welfare Trust,
Ph.8281017777

ORGANISING COMMITTEE

Chief Patron : Dr.P.T. Baburaj, Hon. Director, IUCDS
Patron : Dr. Surekha Ramachandran,
Chairperson & Founder, DSFI
Convenor : Ms Hena N.N, Lecturer, IUCDS
Coordinator : Ms.Rincy Joseph, Director, Alan T21 welfare Trust

Executive Committee: Dr.P.T. Baburaj, Hon. Director, IUCDS
Dr. Surekha Ramachandran,
Chairperson & Founder, DSFI
Dr. Ipe Varghese, Secretary, KAPS
Rev. Fr. Roy Vadakkal, Chairman AID
Rev. Fr. Roy Kannanchira, Director, SOB-Kerala
Ms. Rincy Joseph, Director, Alan T21 welfare Trust
Ms Hena N.N, Lecturer, IUCDS
Ms.Bilgy K.George, Lecturer, IUCDS

Scientific Committee: Dr.P.T. Baburaj, Hon. Director, IUCDS
Ms Hena N.N, Lecturer, IUCDS
Ms. Sindhu P.R, Project Assistant, IUCDS
Mr. Rajanimon K.A, M.Phil Disability Studies

Registration Committee: Ms.Bilgy K.George
Ms. Ginimol P. Project Assistant, IUCDS
Mr. Boney Leo Thomas, M.Phil Disability Studies
Ms. Simy Peter, M.Phil Disability Studies

Accommodation & Hospitality:
Ms. Rini Mariam George, Speech Therapist IUCDS
Ms. Bijitha P.Y, M.Phil Disability Studies



One day National Conference

On

INCLUSION: "leave no one behind"

On 17 December 2016

Venue: Assembly Hall, M.G.University

Organised by

**INTER UNIVERSITY CENTRE FOR
DISABILITY STUDIES (IUCDS)
School of Behavioural Science Building
MG University**

&

ALAN T21 WELFARE TRUST, Changanachery
in collaboration with

DOWN SYNDROME FEDERATION OF INDIA (DSFI)

Supported by

Indian Academy of Paediatrics (IAP)
Department of Student Services (DSS).
Kerala Association of Professional Social Workers (KAPS)
KVM College of Special Education, Cherthala
St. John of God College of Special Education

"We mark this year's International Day of Persons with Disabilities in the wake of the adoption of the ambitious 2030 Agenda for Sustainable Development. This global blueprint for action summons us to "leave no one behind"."

Ban Ki-moon (UN Secretary-General)



Applied for CME Credit Hour of TC Medical Council
Applied for CRE Credit Hour of RCI

ABOUT THE CONFERENCE

In par with the nation's strategic objective to build inclusive societies, the organizers aim is to commemorate International Day of Persons with Disabilities (3 December) and celebrates the extraordinary potential of persons with disabilities. The Conference programme under the theme "Achieving 17 sustainable goals for the future we want: the role to create a more inclusive and equitable world for persons with disabilities." will include key talks, a high-level discussion panel, and cultural events.

OBJECTIVES OF THE SEMINAR

- Create awareness about inclusion and mainstreaming of persons with disabilities
- Promote the national objective of inclusion and mainstreaming of persons with disabilities.
- Propagate the importance of inclusion of persons with invisible disabilities to the academic community



HOST INSTITUTIONS

Inter University Centre for Disability Studies

Inter University Centre for Disability Studies (IUCDS) is a unique centre of Mahatma Gandhi University started functioning in 2010. The centre has active participation and involvement of multi disciplinary group of scholars, scientists, educationists, special educators, rehabilitation professionals, psychologists and health educators who could contribute to the field of disability studies in a holistic perspective. With many challenges in the backdrop, on 22 December 2011, IUCDS had started a unique disability rehabilitation center named, Disability Rehabilitation Early Assessment and Management Services (DREAMS) to concretize its commitment towards capacity building for the empowerment of persons with disabilities in our society. IUCDS also aim at equipping personnel in the field of disability rehabilitation by enhancing their knowledge, skills, attitudes, and perspective towards persons with disabilities.

ALAN T21 Welfare Trust

Alan T21 welfare trust is a registered organisation affiliated to the Down Syndrome Federation of India. It is the pioneer organisation working in the field of Down syndrome in Kerala. The mission of the organisation is to improve the quality of life of persons with Down syndrome and their families. ALAN T21 welfare trust envisions a world where the persons with Down syndrome enjoy their inherent right to be accepted and ensure their complete participation in the society.

ABOUT IDPwD-2016

The International Day of Persons with Disabilities is coordinated by United Nations Enable, which works to support and promote the rights and dignity of persons with disabilities. The IDPWD is marked around the world annually on 3 December, as per General Assembly resolution 47/3 of 14 October 1992, to promote awareness and mobilize support for critical issues pertaining to the inclusion of persons with disabilities in society and development.

The theme for 2016

Achieving 17 sustainable goals for the future we want: the role to create a more inclusive and equitable world for persons with disabilities.

TARGET AUDIENCE

All professionals and students interested in the field of disability studies, Medical Doctors, Nurses, Social workers, Special Educators, Rehabilitation Professionals, Students, Teachers, Families of persons with disabilities, other Academicians, Experts, Research Scholars, College and University teachers, those NGOs actively involved and working towards the positive inclusion of the marginalized groups into the mainstream society.

REGISTRATION FEE

Registration fee includes working lunch and seminar kit. The registration fee should be paid either by cash at IUCDS office or by money order in favour of the Hon. Director, IUCDS along with the filed application on or before December 10th.
Professionals/ Academicians/ Research Scholars: Rs. 200/-
Students & Parents of children with disabilities: Rs. 100/-
Persons with disabilities: Nil
Spot Registration: Rs.250/-

Theme for the seminar

Role of sustainable goals to create an inclusive world

Sub themes

- Inclusion: Educational goals for persons with disabilities
- Inclusion: Employment goals for persons with disabilities
- Inclusion: Health care goals for persons with disabilities
- Inclusion: Trends and issues
- Inclusion: process and strategies
- Inclusion: Success stories of institutions

PAPER/POSTER PRESENTATION

Delegates who wish to present papers in the seminar are requested to send the abstract on or before 05th December 2016. Full paper of the selected theme should reach the conference secretariat on or before 10th December 2016 to the email id iucds-events@gmail.com

- In case of multiple authors for a paper, each author has to register separately
- The paper presenters are also requested to send a declaration stating that the paper is original and it is not presented/published or submitted for presentation/publication elsewhere
- Font: Times New Roman, size 12
- Word limit: Abstract 250 words; full paper 3000 words

CONFERENCE SECRETARIATE

Inter University Centre for Disability Studies (IUCDS),
School of Behavioural Sciences, M.G University,
P.D. Hills P.O, Kottayam - 686 560
www.iucdsmgu.org, iucdsmgu@gmail.com
Phone: 04812731580 / 9846735917

INTER UNIVERSITY INSTRUMENTATION CENTRE

Publications

1 Manoj P. Rayaroth, Usha K. Aravind, Charuvila T. Aravindakumar, Degradation of pharmaceutically active compounds by ultrasound based advanced oxidation process: A review, *Env. Chem. Lett.*, 2016. ISSN: 1610-3653

2 M. P. Rayaroth, U. K. Aravind, C. T. Aravindakumar, Ultrasound based AOP for emerging pollutants: From degradation to mechanism, *Environ. Sci. Pollut. Res.* 2016. ISSN: 0944-1344

- 3 Sunil Paul M. Menachery, Sreekanth R. Nair, Pramod Gopinathan, Usha K. Aravind, and C. T. Aravindakumar, Transformation Reactions of Radicals from the Oxidation of Diphenhydramine: Pulse Radiolysis and Mass Spectrometric Studies, Chemistry Select, 2016. ISSN: 2365-6549
- 4 Jissy Mathew, Akhil Gopalakrishnan, Charuvila T. Aravindakumar, Usha K. Aravind, Transport properties and morphology of CHI/PSS multilayered microfiltration membranes for the low pressure filtration of amino acids, Journal of Chemical Technology & Biotechnology (in press).
- 4 Synthesis of diaryl and arylalkyl sulfides via zinc-catalyzed thioetherification reactions, A. P. Thankachan, K. S. Sindhu, K. K. Krishnan, G. Anilkumar, The Chemist 2016, 0000 (Accepted)
- 5 A Novel Protocol for the Cu-Catalyzed Sonogashira Coupling Reaction between Aryl Halides and Terminal Alkynes using trans-1,2-Diaminocyclohexane Ligand, S. Asha, A. M. Thomas, S. M. Ujwaldev, G. Anilkumar, ChemistrySelect 2016, 3, 0000 (Accepted)
- 6 Synthesis of diaryl and arylalkyl sulfides via zinc-catalyzed thioetherification reactions, A. P Thankachan, K. S. Sindhu, K. K. Krishnan, G. Anilkumar, ChemistrySelect 2016, 0000 (Accepted)
- 8 Iron-Catalyzed Sonogashira Type Cross-Coupling Reaction of Aryl Iodides with Terminal Alkynes in Water under Aerobic Conditions, K. S. Sindhu, A. P. Thankachan, A. M. Thomas, G. Anilkumar, ChemistrySelect, 2016, 3, 556
- 9 Structural and optical properties of functionalized multi- carbon nanotubes, S. Yaragalla, G. Anilkumar, N. Kalarickal, S. Thomas, Mater. Science Semiconduct Processing, 2016, 41, 49
- 10 Recent advances and perspectives in the manganese-catalyzed epoxidation reactions K. K. Krishnan, A. M. Thomas, K. S. Sindhu, G. Anilkumar, Tetrahedron, 2016, 72, 1
- 11 K A Ann Mary, M S Sajna, V P Prakashan, Siby Mathew, N V Unnikrishnan, "Freestanding Ag₂S/CuS PVA films with Improved Dielectric Properties for Organic Electronics", Journal of Applied Polymer Science 43568(2016) 1-7.

- 12 M.S. Sajna, Sunil Thomas, C. Jayakrishnan, Cyriac Joseph, P.R. Biju, N.V. Unnikrishnan, "NIR emission studies and dielectric properties of Er³⁺-doped multicomponent tellurite glasses", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 161 (2016) 130–137.
- 13 R. Vinodkumar, M.S Sajna, V.P Prakashan, N.V.Unnikrishnan, Spectroscopic investigations of RF sputtered Dy: ZnO as a conductive thin film nanophosphor, *J.mater.Sci:Mater.Electr* (2016) In press.
- 14 V Thomas, R G S Sofin, M Allen, H Thomas, P R Biju ,G Jose5and NV Unnikrishnan, Optical Analysis of Samarium Doped Sodium Bismuth Silicate Glass, *Spectrochim. Acta A* (2016) in press.
- 15 T.V Vineeshkumar, T Rithesh Raj, S Prasanth, N.V Unnikrishnan, , c Sudarshana Kumar, composition dependent structural, Raman and Nonlinear optical properties of PVA capped Zn_{1-x-y}CdxCuyS quantum dots, *J.Opt.Mater* 58 (2016) 128.
- 16 Kamal P Mani, Vimal G, P R Biju, N V Unnikrishnan, M A Ittyachen and Cyriac Joseph, Spectroscopic and phonon side band analysis of Tb_{2-x}Eu_x(MuoO₄)₃, *Journal of Molecular Structure* 1105 (2016) 279-285.

Conferenece organised collaboration with SES

Second International Conference on Water (ICW 2016), Dec. 12-15, Kottayam

INTER UNIVERSITY CENTRE FOR ORGANIC FARMING AND SUSTAINABLE AGRICULTURE

JAIVAM- The University has implemented *JAIVAM 2017*-,a public education programme to spread organic farming in Kottayam District. It is commendable that the University has published a Handbook on organic farming and has distributed it among five lakh households.

Around ten thousand National Service Scheme volunteers were selected to propagate the boons of organic farming among the public

Project of Inter University Centre for Organic Farming and Sustainable Agriculture (IUCOFSA).

Abstract

The project aimed at the conversion of abandoned paddy field to cultivable productive wetland and to sustain it as a “live laboratory” model. The neglected wetland that stretched out an area of about 6 acres in Vallakom panchayat was acquired on lease for the project. IUCOFSA accomplished organic farming out there giving due importance to sustainability and innovative wisdom in agriculture. Indigenous varieties of rice were selected for farming. It was planned to follow the paddy-fish model as well as other methods to make agriculture ecofriendly as well as profitable. The University provided needed scientific inputs and support. Nature friendly farming for 3 years was presumed to rejuvenate the neglected wetland that in turn shall be returned to the farmers. IUCOFSA plans to make the program participatory involving the students, researchers and the natives. The knowledge generated would help to extend the possibilities of organic farming in the fruitful conversion of neglected wetlands spread over across other areas of the state. Additional skill acquisition program (ASAP) (both online and offline) also forms an integral part of the project.

Objective

Important objectives of the proposed project include:

Conversion of abandoned wetland to cultivable and productive land, to implement organic farming with the techniques like crop rotation, application of green manure, compost and the use of organic pest control.etc., to promote and advocate the use of indigenous varieties of seeds, fishes and animals, and to create a paradigm shift in the concept of conversion of abandoned wetland to beneficial and good earth, to effect the use of bio-pesticides and bio-fertilizers in farming, to generate a data system of the whole process of farming and to make it

available to people across the country, to use this project as a study material for the students and researchers through Additional Skill Acquisition Program (ASAP). The whole project will be available both online and offline across the globe for interested students, to implement the project as a joint venture of the University, scientific community, and the native people, to evolve the project as a model programme attracting the farmers towards organic farming.

Output

IUCOFSA is very proud that the Centre has produced *Njavara* paddy worth Rs .50,000/- by implementing the principles of organic farming in the abandoned paddy field by converting it into a productive wetland .

ADVANCED MOLECULAR MATERIALS RESEARCH CENTRE

Publications , invited talks and seminar papers of AMMRC

Journal publications

- a) *Paramagnetic Ionic liquids for advance application: a review*, S. Mathew, P.R Nair, Aswathy Joseph, A.S Padmanabhan, Vipin Iype, Gawel Zyla *J.of Molecular liquids*, 2016, 218, 319
- b) *Cuprous oxide nanoparticles in Epoxy network. Micro sctstructure, chain confinement and mechanical behavior*. A.T. Sunny, P.Vijayan, R.Adhikari, Suresh Mathew, Sabu Thomas, *Phy.Chem.Chem.Phy*, 2016,1,19655
- c) *A novel protocol for the Cu- catayzed sonogashira coupling reaction between Aryl halides and terminal alkynes using trans-1,2- diaminocyclohexane ligand* S.Asha, A.M.Thomas, S.M.Ujwaldev and G.Anilkumar, *Chemistry select*, 2016, 1,3938
- d) *Experimental and mechanistic exploration of Zn- catalysed sonogashira-type cross-coupling reactions* A.P.Thankachan, K.S.Sindhu and G.Anilkumar, *Chemistry select* 2016,1, 3405
- e) *Iron- catalysed sonogashira type cross- coupling reaction of Aryl iodides with thermal alkynes in water under aerobic conditions* K.S.Sindhu, A.P.Thankachan, A.M.Thomas and G.Anilkumar, *Chemistry select communications*, 2016,3,556

- f) *Synthesis, Characterization and Studies of Chemically Modified Poly(Acrylonitrile-Butadiene-Styrene) through Nitrile Functionalization* Elssa George, Remyasree Rajan, P.R. Sruthi, Jomon Joy and S. Anas. Sanathanam academic Review, Vol 1, Issue 1, Page 1-6, (2017 January).

Conference Proceedings/seminar papers

- a) *Experimental study on the effects of Bio ethanol petrol blends in a spark ignition engine: Performance Analysis.* Syneesh P., Anu Nair P, Anandhukrishnan, Manoj Mohan, Sachin P, Anas S. A paper presented in the Second international conference on mechanical and manufacturing engineering (ICMME-2017) on 6-7 April, 2017 at SCSVMV University, Knachipuram, Tamilnadu # Abs P -74
- b) Presented a paper on *Spectroscopic investigations on ionic liquid- polymer composites of N butyl pyridinium bromide and Polyvinyl pyrrolidone for thin film applications* (authors: Aswathy Joseph and Marylin Mary Xavier) in 26th Swadeshi Science Congress on 7-9 November 2016

Invited Talks/general lectures :

- a) Invited talk on “*Recent Advances in Organic synthesis*” at T.M.Jacob Memeorial Government College Manimalakunnu, Koothattukulam, in a national seminar on “Advanced Concepts in chemistry” on 21st December 2016
- b) Invited talk on “*Progress and prospects of Metal mediated Organic synthesis*” at Government College for Women, Thiruvananthapuram, in a national seminar on “Synthetic Organic chemistry: Fundamentals and Advances” on 24th November 2016
- c) Invited talk on “*History and Progress of Organic synthesis*” at St. Berchmans school, Changanassery in connection with the world science day on 10th Novemeber 2016
- d) Invited talk on “*Historic Progression and trends in Organic synthesis*” at Assumption college, changanassery, Kerala in connection with the college chemistry association inauguration on 4th August 2016

National & International Conferences/workshop/seminars Organized

- a) National seminar on Recent Advances in Material science Organized by Advanced Molecular Materials Research Centre (AMMRC) on 18th and 19th November 2016 at MG University Kottayam

- b) Organised a lecture on "Nanocatalyst Development for Fuels from Biomass" by Prof. Debasish Kuila of North Carolina A&T State University, USA in association with IUIIC on 22nd December, 2016.

7. Resources mobilized through external agencies for

(i) Research :- **15 M.Sc, 4 B.Tech, 1 B.Sc and 4 M.Phil students from various colleges carried out their project work by utilizing the facilities at AMMRC**

CENTRE FOR YOGA & NATUROPATHY

Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any

Sl. No.	Name of Programme	Source of funding	Details of outstanding participants
01	Inaugural seminar of CYN- National level 12 th January 2016	M.G. University	<ul style="list-style-type: none"> • Shri. Subodh Tiwary, Kaivalyadhama Institute of Yoga, Lonawla, Mumbai, • Dr. Vinod Kool, State University of New York Polytechnic Institute, • Dr. Balarama Kaimal, Scientist, Pushpagiri Medical College, Thiruvalla.
02	Two days National Seminar on Relevance of Yoga in Modern Life on 18 th & 19 th March 2016	M.G. University	<ul style="list-style-type: none"> • Shri. Hiara Ratan Manek, • Ms. Jessica Rani Bauer (Aix Marseille University, South France), • Prof. Dr. John Baby, • Dr.T.V.Padmanabhan, Kannur University
03	Three days International	M.G.	<ul style="list-style-type: none"> • Mrs. Murelle Ikareth, Saaram Centre for

	Residential Seminar on Yoga for All for Health Promotion. On 10,11&12 th March 2017	University	<p>Ayurveda & Arts.</p> <ul style="list-style-type: none"> • Prof.Dr.Dayaratna Edirisinghe, University of Kelaniya, Sri Lanka. • Dr. T. V. Padmanabhan, Co-ordinator, Centre for Yoga, Kannur University. • Dr.D.Nesy, Retd. Professor in Philosophy, University of Kerala. • Dr. Jobin K. Thomas DHH Pharmaceuticals, Karnataka. • Dr. Jacob Vadakkumcherry
04	Talk Series. 1 10/08/2016	M.G. University	Sri M, Spiritual Guide, Social reformer and Educationalist
05	Talk Series 2 01/09/2016	M.G. University	Sr. Lucy Kurian, Director, MAHER, Pune
06	Talk Series 3 14/02/2017	M.G. University	Dr. C. Thomas Abraham, Senior Trainer, TCI International.
07	Observation of International Yoga Day on 21/06/2016	M.G. University	Observed IYD by participating around 2000 NSS Volunteers at Baseliious College Kottayam.

INSTITUTE FOR CONTEMPORARY CHINESE STUDIES

Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

1. Prof. Jia Haitao, Director, Institute for Chindian Studies, Jinan University, China served visiting scholar at ICCS for 2 weeks during January 2016.
2. Dr. Yinghong Huang, Associate Professor, Sun-Yat-Sen University, China served as Visiting Professor at ICCS for 3 weeks during August 2016

3. International Meet on Youth Development organized in association with the Department of Lifelong Learning and Extension during 19 August 2016.

Research Papers in peer-reviewed journals/Book Chapters only.

Books- Published
C.Vinodan Ed.(2017), India's Foreign Policy and Diplomacy: Emerging Scenario and Challenges, New Century Publications, New Delhi, ISBN 978-81-7708-436-8
C.Vinodan Ed.(2017), Defence and National Security of India: Concerns and Strategies, New Century Publications, New Delhi, ISBN 978-81-7708-440-5
Co- Author (2017), US Occupation and Human Rights Issues, Gyan Books Publishers, New Delhi, ISBN : 978-93-8022-3100
C.Vinodan Ed.(2017), Good Governance and Development : Challenges in India, New Century Publications, New Delhi, ISBN 978-81-7708-446-7.

SI No.	<i>Journal Paper/Book Chapter: Author(s), Title, Journal Name, Vol, No, Month & Year, Pages</i>
1	Co- author (2016), Human Rights Violations and Post-Saddam Iraq, <i>International Journal of Management and Social Science Research Review</i> , Vol.1, Issue.2. PP-198-203, ISSN -2349-6738, Impact Factor: 3.029
2	Co- author (2017), Environmental Governance and Conservation of Western Ghats, in C.Vinodan (Ed.) Good Governance and Development Challenges in India, New Century Publishers, New Delhi. . ISBN 978-81-7708-446-7.
3.	Co- author (2017), Local Governance and Disaster Risk Reduction , in C.Vinodan (Ed.) Good Governance and Development Challenges in India, New Century Publishers, New Delhi. . ISBN 978-81-7708-446-7.
4.	C.Vinodan (2017), India's Maritime Challenges in the South China Sea, in C.Vinodan Ed.(2017), Defence and National Security of India: Concerns and Strategies, New Century Publications, New Delhi, ISBN 978-81-7708-440-5

Paper presentation

1. C.Vinodan, Emerging Powers and Energy Security: India and China in the Pacific Century, ISA International Conference on the Pacific Century held at Hong Kong University, Hong Kong during 15-17 2017.
2. C.Vinodan, Maritime Dimensions of Energy Security, The 2016 Sino-Indian Cross Cultural Dialogues held by the Institute of Advanced International Studies, **Sun Yat-sen University, Guangzhou, China** during 17-19 June ,2016.
3. C.Vinodan, Climate Change and Sustainable Development: Implications for India, 2nd International Conference on: Inclusive Economic Growth and Sustainable Development, organized by SDMIND Institute for Management and Development, Mysore during 18-19 November, 2016.
4. C.Vinodan, Women Empowerment and Climate Change in a Changing World, International Conference on: Envision: A Holistic View of Empowering Women, organized by St.Xaviers College for Women, Aluva during 15-16 November, 2016.
5. C.Vinodan, Environmental Conservation and Human Rights Issues: The Case of Western Ghats in India, International Seminar on: Human Rights in India- Current Issues and Challenges, organized by the Political Science and Publication Wing, Annamalai University in Association with the ICSSR New Delhi during 29-30 March, 2016.

No. of conferences organized by the Institution

1. The ICCS organized a major International Conference on the theme “India, China and The New Silk Road Initiatives: Challenges and Opportunities” jointly with the School of International Relations and Politics during 11-12 November 2016.
2. The ICCS Organised an international conference on **Understanding Contemporary India** in association with the Rajiv Gandhi Chair for Public Policy Studies, Mahatma Gandhi University during 14-15, January 2016
3. Symposium on “Political Transformation and Development in China and India” on Thursday, 18 August 2016.
4. The ICCS organized another major Conference on the theme “Engaging Diaspora” jointly with the Nelson Mandela Chair for Afro-Asian Studies, SIRP during March 2015

INSTITUTE FOR INTENSIVE RESEARCH IN BASIC SCIENCES

2.5 Faculty participation in conferences and symposia:

International

1. **International Conference on Tropical Plants & Molecular Design**, T.K.M College of Arts and Science, Kollam, Kerala, 14-15 Feb, 2017. “Molecular crafting with (2*S*,3*S*)- and(2*S*,3*R*)-Tetrahydro-3-Hydroxy-5-Oxo-2,3-Furandicarboxylic Acids”.
2. **International Symposium - New Trends in Applied chemistry (NTAC 2017)**, S.H College Thevara, Kochi, 9-11, Feb 2017 “Synthetic exploration of chiral molecules of natural origin employing Boron reagents.”
3. **International conference on emerging Frontiers in Chemical Sciences**, Farook College, Kozhikode , Kerala, Sept. 2017 “Synthesis of enantiopure molecules (epc synthesis) using chiral building blocks obtained from regional resources”.

National

1. **National Seminar on the occasion of the Sesquicentennial Celebrations of University College, Recent Advances in Chemical Sciences (RACS-17)**, Trivandrum, March 13th and 14th 2017. “Synthesis of enantiopure molecules using Molecules obtained from Regional resources”.
2. Synthesis of biologically and functionally useful enantiopure molecules obtained from (2*S*, 3*S*) tetrahydro-3-hydroxy-5-oxo-2,3-furan dicarboxylic acids.”, T. K. M. College of Arts, Kollam, February 2017 – **Zabeera K. T.**
3. “Controlled reduction of diastereomeric Garcinia and Hibiscus acids by judicious use of boron reagents”. T. K. M. College of Arts, Kollam, February 2017 – **Prasanth C. P.**
4. “Synthesis of few drugs from 2-hydroxy citric acids”, T. K. M. College of Arts, Kollam, February 2017 – **Vysakh V. Nair**

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Prof (Dr.) I.Ibnusaud, Director, IIRBS has been selected as the member of National Academy of Sciences, India (NASI, 2017, Allahabad)

3.2 Details regarding major projects

Ongoing Projects

1. DST Inter University NMR Facility (IRPHA Scheme)**DST, Govt. of India Project No.: IR/S1/CU/01/2007**(ongoing)
Project Amount – 1.55 Crores
2. Ex-chiral pool synthesis towards few molecules of Anticancer & Anti-tuberculosis Likeness **CSIR Project No. 02(0101)/12/EMR-II** dated 31.10.2012
Project Amount – 30 lakhs
3. **Project** “Synthesis of few Medicinally Important Chiral Molecules Derived from Renewable Resources”(DST, Govt. of India) **Project No.SR/S1/OC-98/2012 dated 07.03.2013**
Project Amount - 55lakhs

3.4 Details on research publications

International

1. Capillary zone electrophoresis for the analysis of naturally occurring 2-hydroxycitric acids and their lactones, Authors: B. L. Abhijith 1, Moolya Mohan1, David Joseph1, Hassan Y. Aboul-Enein2*†, Ibrahim Ibnusaud1*, B. L. Abhijith 1, Moolya Mohan1, David Joseph1, Hassan Y. Aboul-Enein2*†, Ibrahim Ibnusaud1*, *Journal of Separation Sciences*, Wiley, *J Sep Sci.* **2017**; 00:1–7.
2. “Green Oxidation Protocol for Alcohols to Carbonyls by Tertbutylhydroperoxide Over MnO₂ Catalysts: Comparison of Bulk and Nanostructure” Anand S. Burange, Ashtami Jayakumar, Amber J. Sahani, Savita Ladage, Radha V. Jayaram. *Current Catalysis*, **2017**Vol.6, 2,115 -122
3. Multiwell Assay for the Analysis of Sugar Gut Permeability Markers: Discrimination of Sugar Alcohols with a Fluorescent Probe Array Based on Boronic Acid Appended Viologens, Angel Resendez, Prier Panescu, Ruth Zuniga, Isaac Banda, Jorly Joseph, Dominic-Luc Webb and Bakthan Singaram, *Anal. C hem.*, **2016**, 88 (10), pp 5444–5452

3.11 No. of conferences/workshops organized by the Institution

Workshop on "Computational Chemistry", 19 th - 24 th June 2017	Dr. Anoop A (IIT Kharagpur), Dr.Sajeev Y (BARC Mumbai), Dr.Balanarayanan (IISER Mohali), Dr.Gopakumar G (IGCAR Kalpakkam), Dr.C.H. Suresh (NIIST Thiruvananthapuram), Dr.Padmesh (IIT Palakkad),

	Dr.C.N. Ramachandran (IIT Roorkey), Dr.P. Parameswaran (NIT Calicut) , Dr.Susmita De (NIT Calicut), Dr.D.Usharani (CSIR-CFTRI Mysore)
Enrichment Lecture on “ Kinetics and catalysis”, 24 th – 28 th April 2017	Prof. Radha V. Jayaram (ICT, Mumbai)
Workshop on "EPR & NMR Spectroscopy" 3 rd - 8 th April 2017	Prof. S. Subramanian(IIT, Madras)
Workshop on "Free & Open Source Software for Academia" - 17.02.2017	Sri. Satish Babu(President, InApp Information Technologies ISOC/ICANN/IEEE/InApp/CSI)
Lecture on "Hetrocyclic Chemistry" - 16.02.2017	Prof. Keith Smith(Cardiff University,UK)
Lecture on "Excitements in Natural Products Chemistry" - 11.02.2017	Prof. Manfred Schneider(Germany), Prof. J. S. Yadhav(IICT, Hyderabad)
Lecture on "High Performance Liquid chromatography(HPLC),7 th - 21 st February 2017.	Prof. Hassan Aboul-Enein Y. (Dept. of Pharmaceutical & Medicinal Chemistry , National Research Centre , Egypt)
Lecture on "Boron based organic chemistry",17 th January - 08 th February 2017.	Prof. BakthanSingaram (Dept of Chemistry and Biochemistry - University of California, California)
SERB - DST Expert Committee Meeting, 4 th - 6 th January 2017	
International Symposium on ”Concurrent Methodologies in Organic Synthesis” - 13.02.2016	2010 Nobel Laureate in Chemistry, Prof. Ei-ichiNegishi, Purdue University, USA

3.13 No. of collaborations

International

1. University of California , Santa Cruz, USA
2. Vanderbilt University, USA
3. University of Texas in Airlington, USA
4. Functional Materials Division, Pusan National University, Busan, Korea
5. University of Paris Sud, France.
6. Johnson Matthey, New Jersey, USA

National

1. Dr. Anil J Elias, Professor, Department of Chemistry, Indian Institute of Technology, Delhi
2. Dr. I. N. N. Namboothiri, Professor, Department of Chemistry, IIT Mumbai
3. Dr.Radha V. Jayaram, Professor, ICT, Mumbai
4. Dr. Manoj Ramavarma , NIIST, Trivandrum
5. Dr.R.B Sunoj,Dept. of Chemistry, IIT Mumbai
6. Dr.Savita Ladage, HBCSE, TIFR, Mumbai

3.16 No. of patents received this year:2

Patents

1. Enatiopure total synthesis of indolizinoindole alkaloid (+)harmicine and (-) harmicine from (2*S*,3*R*)-Tetrahydro-3-hydroxy-5-oxo -2,3-furandicarboxylic acid (Hibiscus acid) and (2*S*,3*S*)-Tetrahydro-3-hydroxy-5-oxo -2,3-furandicarboxylic acid(Garcinia acid)Ibrahim Ibnusaud and [SarathMuralidharan Pillai](#). Indian Patent No.3682/CHE/2016.
2. Synthesis of(*R*)-(+)-CrispineAand(*S*)-(-)-Crispine A from(2*S*,3*R*)- and (2*S*,3*S*)- Tetrahydro-3-hydroxy-5-oxo-2,3-furandicarboxylic acids, DivyaSadasivan Nair, DeenammaHabel and Ibrahim Ibnusaud, Indian Patent No.3484/CHE/2016.

KN RAJ CENTRE FOR PLANNING AND CENTRE STATE RELATIONS

GOODS AND SERVICES TAX 2016

Posted 05 Sep 2016

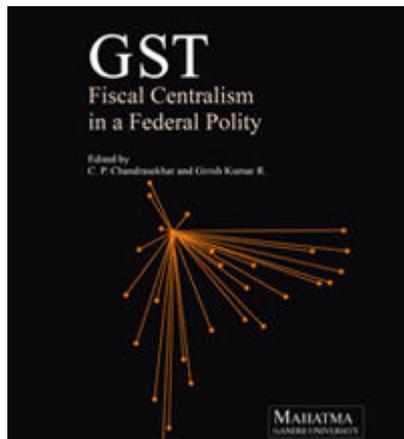
Symposium on "GOODS AND SERVICES TAX 2016" on 18-Mar-2016.



National Symposium on Goods and Services Tax conducted with Mr. Anto Antony (Honorable Member of Parliament), Mr. C.P Chandrasekhar(JNU), Mr. Aneish Rajan IRS (Govt of India), Prof. Ramalingam, Prof. Gopa Kumar etc.. participated.



Publication



G S T Fiscal Centralism in a Federal Polity, C. P. Chandrasekhar, Girish Kumar R, K N Raj
Centre for Planning and Centre State Financial Relations, Mahatma Gandhi University, 01-
Dec-2016

Programmes organised

- Workshop on 'Budgeting and Legislation' in collaboration with GIFT held on 6-8
March 2017



Pampa Yatra conducted on 14-15 November,2016



Symposium on 'Pampa:Environment,Culture and Governance' held on 19-21 May,2017



NATIONAL INSTITUTE FOR PLANT SCIENCE AND TECHNOLOGY

Alan Thomas S receiving Best paper presentation award at International seminar on emerging trends in organic farming and sustainable agriculture held at Kottayam during 29th to 31st December 2016



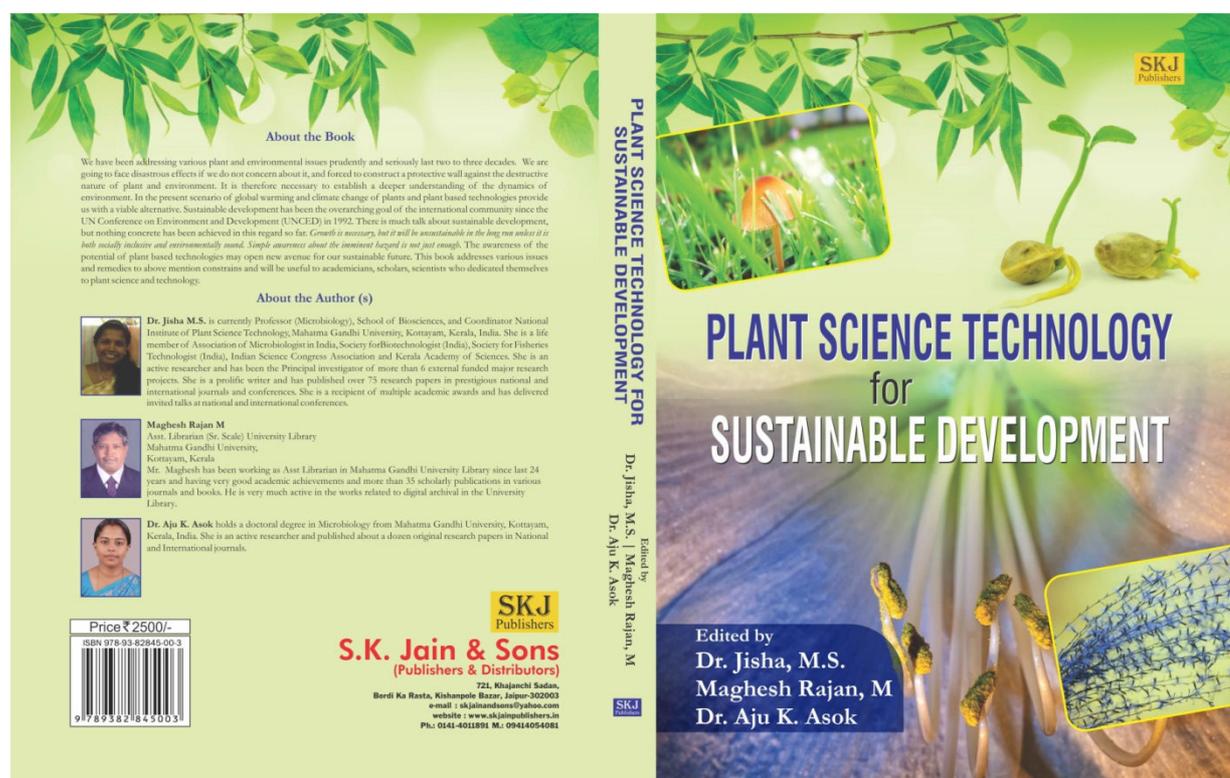
Anto Joseph

- **GATE Qualified (2015)**
- **UGC/CSIR NET Qualified (June 2016)**
- **Got Best paper presentation award at The National Seminar on Plant science Technology for sustainable world held at Kottayam during February 25th - 26th 2016**

Conducted 02 days Workshop on “Creative writing for tapping funding resources and effective publication”*Date : 27-28th Feb. 2017*



Book Published



UNIVERSITY CENTRE FOR INTERNATIONAL CO-OPERATION

1.1 Details about Academic Programmes:

UCIC is conducting any regular course. But the center has prepared 23 e-learning modules in different subject area for global learners as part of the FDP programme organized by the center. Also short modules are identified for conducting short term programmes under the head “India Study Programme”

No Permanent Faculty appointed for the center.

In the academic year 2016-17 the following international students are studying where UCIC has co-ordinated the admission.

Sl. No.	Name of the Student	Country	Course and scheme	College/School
1	Ms. Nwabugwu	Nigeria	M.A International Relations	SIRP, MG University

	Amarachi Augusta			
2	Mr. Mayiek Aldrine Kimtai	Kenya	M.A. Economics	K.N. Raj Centre, M.G University
3	Ms. Sushma Khaiju	Nepal	M.Sc (Disability Studies and Rehabilitation Sciences)	School of Behavioural Sciences, M.G University
4	Ms. Nyaribo Nyangara Knight	Kenya	M.Sc. Computer Science,	SCS, M.G. University
5	Mr. Feyisa Rita Melaku	Ethiopia	Ph.D. in Social Work (ASS)	SGTDS, MG University
6	Mr. Hay Sambo	Cambodia	M.Sc. (Comp. Sc.) (Mekon Ganga Scholarship Scheme)	SCS, M.G. University
7	Mr. You Vanndy	Cambodia	M.Sc. (Comp. Sc.) (Mekon Ganga Scholarship Scheme)	SCS, M.G. University
8	Mr. El. Hadji Mamour Sakho	Senegal	Ph.D. (ICCR/ ASS)	SPAP , MG University
9	Ms. Ni Luh Hindy Citra Satyawati Inggas	Indonesia	B.A. Economics (GCSS)	K.E. College, Mannanam

Initiatives undertaken towards faculty development

UCIC has organized a Faculty Development programme on “E-learning and E-content development” in association with DCDC and School of Computer Sciences where 23 faculty members from various institutions participated.

Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

UCIC organized an International Students and Research Scholars meet on 6th December 2017 where 80 international students and research scholars from various Universities in Kerala were present.

Publications of the Faculty Members 2016

Sajimon Abraham (Hon. Director, UCIC)

Title	Author/s	Publication	Impact factor if any
“Spatio Temporal Customer Analysis of Big data Generated from GPS traces of moving objects for personalized Customer Relationship Management”,	Nishad A, Sajimon Abraham	Rajagiri Management Journal, ISBN: 9729968, December 2016	
Semantic Trajectory Analysis for Identifying Locations of Interest of Moving Objects”	Nishad A, Sajimon Abraham	IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20- 22, 2017	
“Spatio Temporal Tracking an augmented tool for Supply Chain Management”	Nishad A, Sajimon Abraham	International conference on Best Practices in Supply Chain Management, December 22-23, 2016	
“Sexual Category Feature Extraction of Sentiments about Ayurvedic Health Treatment”,	Deepa Mary Mathews, Sajimon Abraham	International Conference on Current Trends in Engineering, Science and Technology ICCTEST – 2017, ISBN: 978-81-931119-5-6, JAN 5-7, 2017	
“Extraction and Evaluation of Patients’ Standpoints Pertaining to Ayurvedic Health Treatment”	Deepa Mary Mathews, Sajimon Abraham	International Journal of Research in Engineering and Applied Sciences (IJREAS), ISSN(O): 2249-3905, ISSN(P) : 2349-6525 , May 2017	
“Analytic Thinking of Patients’ Viewpoints Pertain to Spa Treatment”	Deepa Mary Mathews, Sajimon Abraham	IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20-22, 2017	
“Big Data Challenges in Supply Chain: Review on Analysis Techniques Using Statistical Methods and Machine Learning”	Saritha K, Sajimon Abraham	International conference on Best Practices in Supply Chain Management, December 22-23, 2016	
“Prediction with Partitioning: Big Data Analytics Using Regression Techniques”,	Saritha K, Sajimon Abraham	IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July 20-22 2017.	
“Big Data Challenges and Issues: Review on Analytic Techniques”	Saritha K, Sajimon Abraham,	Indian Journal of Computer Science and Engineering (IJCSE), e-ISSN: 0976-5166, p-ISSN : 2231-3850, 2017 June.	
“Some unstructured Data Mining Methods to Mine Knowledge from Supply Chain	Benymol Jose, Sajimon Abraham,	International conference on Best Practices in Supply Chain Management, December 22-	

Data:A NoSQL perspective”		23,2016	
“Some Big Data Analytics Methods to Mine Knowledge from Supply Chain Data”,	Benymol Jose, Sajimon Abraham	, International Conference on Science, Engineering, Technology and Management, March 8-9,2017	
“Exploring the merits of NoSQL: A study Based on MongoDB”,	Benymol Jose, Sajimon Abraham	IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July20-22,2017	
“Role of Algorithms in Computer Technology”	Lumy Joseph, Sajimon Abraham	E-learning Instructional Designs for Short Learning Objects, ISBN 978-93-80419-29-9, January 16-30, 2017	
“Instructional Design for Learning Path Identification in an E-learning Environment using Felder-Silverman Learning Styles Model”	Lumy Joseph, Sajimon Abraham	IEEE conference Proceedings of the International conference on Networks and Advances in Computational technologies- NetAct17, ISBN 978-1-5090-6590-5, July 20-22,2017	
, “Web- Based Psychometric Testing Tool for Identifying Patient’s Genetic Variations in Health-Care Management”	Lumy Joseph, Sajimon Abraham	29th Kerala Science Congress, ISBN 81-86366-93-98, January 28-30, 2017	
Privacy preserved approach for Trajectory Anonymization through Zone creation for halting points”,	Rajesh N, Sajimon Abraham	IEEE Conference International Conference on Networks & Advances in Computational Technologies, ISBN 978-1-5090-6590-5, July20- 22,2017	
Dr. C. Vinodan- Joint Director, UCIC			
Human Rights Violations and Post-Saddam Iraq, <i>International Journal of Management and Social Science Research Review</i>	Vinitha Varghese & C.Vinodan	Vol.1, Issue.2. PP-198-203, ISSN -2349-6738, Impact Factor: 3.029	
India’s Foreign Policy and Diplomacy: Emerging Scenario and Challenges	C.Vinodan Ed.	New Century Publications, New Delhi, ISBN 978-81-7708-436-8	
Defence and National Security of India: Concerns and Strategies	C.Vinodan Ed.	New Century Publications, New Delhi, ISBN 978-81-7708-440-5	
US Occupation and Human Rights Issues	Co- Author	Gyan Books Publishers, New Delhi, ISBN : 978-93-8022-3100	
Good Governance and Development : Challenges in India	C.Vinodan Ed.	New Century Publications, New Delhi, ISBN 978-81-7708-446-7.	

Sl No.	Journal Paper/Book Chapter: Author(s), Title, Journal Name, Vol, No, Month & Year, Pages
1	Co- author (2016), Human Rights Violations and Post-Saddam Iraq, <i>International Journal of Management and Social Science Research Review</i> , Vol.1, Issue.2. PP-198-203, ISSN - 2349-6738, Impact Factor: 3.029
2	Co- author (2017), Environmental Governance and Conservation of Western Ghats, in C.Vinodan (Ed.) Good Governance and Development Challenges in India, New Century Publishers, New Delhi. . ISBN 978-81-7708-446-7.
3.	Co- author (2017), Local Governance and Disaster Risk Reduction , in C.Vinodan (Ed.) Good Governance and Development Challenges in India, New Century Publishers, New Delhi. . ISBN 978-81-7708-446-7.
4.	C.Vinodan (2017), India's Maritime Challenges in the South China Sea, in C.Vinodan Ed.(2017), Defence and National Security of India: Concerns and Strategies, New Century Publications, New Delhi, ISBN 978-81-7708-440-5

Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

UCIC has organized the following special lecture/talk

1. Organized as Special Talk and Interaction on Research and Career Opportunities in Germany 6th February 2017.
2. Two Weeks Capacity Building workshop on E-learning and E-Content Development 16-30 Jan 2017 , In association with DCDC and SOCS.
3. Special Talk and Interaction on Fulbright Fellowships and Research Opportunities in US by Maya Sundararajan (US Consulate General, Chennai) 27 February 2017.
4. Fellowship offered by Government of Australia for Masters, Ph.D, Post Doctoral and Executive Levels in Australian Universities by K.S. Beena (Professor, CUSAT) 24 May 2017
5. Book Published titled "Instructional Design for short learning Object" published in In 24th May 2017.

4.1 Details of increase in infrastructure facilities:

Infrastructure	Held Up To 31/3/2015	Acquired In 2016
Laboratory equipments		
Books		
Computers	Desktop-1, Laptop 1	

Printer	1	
UPS	1	
Photocopier cum printer		1
Digital Camera	1	
Furniture (UCIC Office)	Steel Almirah- 1 Office chair -3 Nos. Computer Table -1No. Computer chair with arm- 1 Nos.	
Furniture (UCIC International Hostel)	Coat-Single-10 Nos. Study Table- 10 Nos. Cupboard-1 Bed-11 Nos Dining Table-1 Dining Chair- 6 Nos. Plastic Chair- 4 Nos. Steel table –Nos. Steel Almirah- 4 Nos.	
Electrical Items(UCIC International Hostel)	Washing Machine -2 Nos Refrigerator -2 Nos TV Sony – LED- 2 Nos. Water Heater-1 UPS-1 Vacuum cleaner-1 Stabilizer-1 Water pump- 1 No.	

Contribution of IQAC in enhancing awareness about Student Support Services

Facilitating the International students in admission, accommodation and other academic transactions

- Initiated to sanction travel grant(Rs 98,000) under Semester Abroad Programme to Smt. Chithira V. Kartha, M.S student of IUCNS for her research work at Max Planck Institute for the Science of Light, Erlangen, Germany. -one year course thesis work (3rd and 4th semesters), June 2016.

Efforts made by the institution for tracking the progression

- The international students progress in collected from the respective schools and sending to ICCR

Does the Institution has a management Information System : YES

1. To promote academic collaboration and exchange in teaching and research;

2. To identify potential international institutions of repute that shall enter into collaboration with Mahatma Gandhi University;
3. To identify potential academic areas of co-operation;
4. To formulate short term inter-disciplinary courses for foreign students;
5. To facilitate international co-operation between University Departments and colleges with foreign academic institutions;
6. To co-ordinate with national agencies such as UGC, ICCR, ICSSR, ICHR in the promotion of international co-operation;
7. To facilitate the visits of students, research scholars and teachers from Mahatma Gandhi University in institutions abroad;
8. To promote and host study abroad programmes of institutions from abroad;
9. To provide necessary inputs to university decision making bodies so that international exchange will take place to the satisfaction of the institutions involved.

List of Foreign Students Admitted to Mahatma Gandhi University through the ICCR Sponsored Cultural Exchange Schemes / Exchange Scholars / MoU during 2015-2016

Sl. No.	Name of the Student	Country	Course and scheme	College/School
1	Ms. Nwabugwu Amarachi Augusta	Nigeria	M.A International Relations	SIRP, MG University
2	Mr. Mayiek Aldrine Kintai	Kenya	M.A. Economics	K.N. Raj Centre, M.G University
3	Ms. Sushma Khaiju	Nepal	M.Sc (Disability Studies and Rehabilitation Sciences	School of Behavioural Sciences, M.G University
4	Ms. Nyaribo Nyangara Knight	Kenya	M.Sc. Computer Science,	SCS, M.G. University
5	Mr. Feyisa Rita Melaku	Ethiopia	Ph.D. in Social Work (ASS)	SGTDS, MG University
6	Mr. Hay Sambo	Cambodia	M.Sc. (Comp. Sc.) (Mekon Ganga	SCS, M.G. University

			Scholarship Scheme)	
7	Mr. You Vanndy	Cambodia	M.Sc. (Comp. Sc.) (Mekon Ganga Scholarship Scheme)	SCS, M.G. University
8	Mr. El. Hadji Mamour Sakho	Senegal	Ph.D. (ICCR/ ASS)	SPAP , MG University
9	Ms. Ni Luh Hindy Citra Satyawati Inggas	Indonesia	B.A. Economics (GCSS)	K.E. College, Mannanam

Innovations introduced during this academic year which have created a positive impact on the functioning of the institution.

1. Regulations made for streamlining International Students Admission
2. Steps to attract more International Students in the Campus by providing the admission details available on-line.

FDP programme organized for developing short programme modules for India Study

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

At the beginning of every year UCIC executive council meetings are organizing for planning and scheduling the activities for the year.

Two Best Practices of the institution (please see the format in the NAAC Self-study Manuals)

FDP programme organized for developing short programme modules for India Study to deliver as MOOC programme

BUSINESS INCUBATION AND INNOVATION CENTRE

Programmes conducted

GIIS - 2017



BIIC Start-up Program 2017



UNIVERSITY LIBRARY

No. of research awards/ recognitions received by faculty and research fellows:

1. Smt. Laila T.Abraham, University Librarian-in-charge received Best Paper award in International Symposium ETD 2015 organized by UGC-INFLIBNET and NDLTD, USA at JNU, New Delhi during November 4-6, 2015.
2. Shri. Maghesh Rajan M., Assistant Librarian Senior Scale received “Excellence Award” in recognition of exemplary contributions in Library and Information Science

by the University of Mysore in association with Karnataka State SC/ST Library Professionals Association on February 12th, 2016, at Manasagangothri, Mysore.

Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Extended remote access to E-resources subscribed by the university including UGC-INFONET consortium to departments and study centres located outside the main campus of the university.

Computerization of administration and library

Has developed and is maintaining online Theses Library at <http://www.mgutheses.in/> and online Synopsis Library. Also uploaded all Phd. theses awarded by the university in Shodhganga

Computer, Internet access, training to teachers and students and any other programme for technology

Upgradation (Networking, e-Governance etc.)

Conducted 11 Nos of Orientation/Training Programmes on access to e-resources during 2016-17

2016

Orientation programme on new E-resources and introduction of plagiarism software

1. URKUND Orientation on University Library to P.G.Students of Dr. K.N.Raj Study Centre on 22-6-16
2. Orientation programme to B.L.I.Sc Students of St. Peter's College, Kollencherry on 8-7-16
3. Orientation programme on new E-resources and introduction to Plagiarism software URKUND on 12-5-16
4. Orientation programme to B.L.I.Sc. students of Department of Library and Information Science, M.G.University on 7-11-16
5. Orientation lecture to working Librarians under KottayamJilla Library Council on 25-11-16

6. Orientation programme to P.G.Students, Devamatha College, Kuravilangadu on 21-12-16

2017

1. Orientation programme to Librarians under Kerala Library Council on 27-1-17
2. Orientation programme to Librarians under Kerala Library Council on 22-3-17
3. Presentation for librarians on EBSCO Elite database 12-6-17
4. Orientation to M.Phil students of School of International Relations on 11-7-17
5. Orientation to students of K.N.Raj Centre on 12-7-17
6. User awareness programme to P.G. students of School of Management and Business Studies on 26-7-17

6.1 State the Vision and Mission of the institution

1. Provide best quality of online content of Ph D theses
2. Provide facility towards easy access to theses
3. Develop and maintain institutional archrivals of theses as an open access resource
4. Provide right information to the right user in the right time
5. Provide adequate infrastructural facilities for accessing online services

6.2 Does the Institution has a management Information System

Yes. Open source Library management software KOHA is used to manage the in-house operations of the library

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

1. Had set up an Electronic Lab for visually challenged users
2. Launched a new website for University Library at <http://library.mgu.ac.in/>
3. Implemented RFID –CCTV system in the library

Plans of institution for next year

1. To increase the reading and stack area of books by constructing both lateral and vertical extensions to the building

2. To add more infrastructural facilities for providing access to information and other library services

3. Air-conditioning of the library

Annexure to Criterion VII

i. Electronic Lab for visually challenged

In order to meet the information requirements of visually challenged community, the library has set up an Electronic Lab for visually impaired users, which involves the complete facilities of Talking Book Library, Reading Library and Braille Book Library for the Blind. The lab has been set up using UGC XII Plan Fund in October 2015. Books are audio-recorded as per the request of visually challenged users from this lab. As a continuous project, KITS Engineering college, Kottayam, is providing technical support in the audio-recording of degree level text books for blind students undergoing courses in the affiliated colleges. The Lab was inaugurated by Hon. Vice Chancellor Dr. Babu Sebastian on 5-5-2016.

ii. Creation of New Website

The University Library provides various online services. This includes providing access to various databases, UGC-INFONET Consortium, Digital Archives of M G University's PhD Theses, E-Books and Back files of E-journals. Access to these resources are under IP authentication and hence available to the academic community through its campus area network. For showcasing and providing quick access to all the resources, library has created a new website exclusively for University Library (www.library.mgu.ac.in). Website was launched by Hon. Pro-Vice Chancellor Dr Sheena Shukkur on 5.5.2016.

iii. Implementation of RFID-CCTV System

Mahatma Gandhi University Library is the first University Library to implement RFID-CCTV system in Kerala. The system modernizes the in-house operations of the library using RFID technology. RFID is useful with regard to its accuracy and speed in issue/return, stock verification of books etc. The system also enables theft control with its gate alarm, self check-in / check-out of books using Kiosk and Drop Box. It helps the users to return books in off hours also. As an additional security facility, CCTVs have been installed with proper

monitoring and recording facilities. RFID-CCTV system was inaugurated by Hon. Vice-Chancellor Dr. Babu Sebastian on 15th February, 2017.
