Prof. (Dr) A Mujeeb

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http://photonics.cusat.ac.in/dr-a-mujeeb/

Senior Professor
International School of Photonics
Cochin University of Science and Technology, Kochi, India
+91 [484 257 5848, 484 286 2717]
+91 944 741 9505

Specialization

Optoelectronics, Applied Electronics, Physics

Currently

Member, IQAC and Core Committee IQAC, CUSAT
Member, Academic Council, CUSAT
Member, Faculty of Technology, CUSAT
Member, Standing Appellate Committee, AICTE
Member, Steering Committee, NAAC, CUSAT
Member, Tech. Committee
KIIFB, CUSAT
Member, CSS
Academic Committee, CUSAT
Member, Implementation Group
DST Purse, CUSAT
Member, Board of Studies
Photonics, CUSAT
Member, Board of Studies
Forensic Sciences, CUSAT
Member, Executive Committee
Indian Society of Non-Destructive Testing

Formerly

Director, International School of Photonics, CUSAT
Director / Jt. Director, LBSCST, Govt. of Kerala
Member, Syndicate, CUSAT
Member, Syndicate, Mahatma Gandhi University
Member, Executive Committee, APJ AK Tech. Univ.
Member, SAC, AICTE, New Delhi
Member, SAC, APJ AK Kerala Tech. University
Coordinator, CSIR UGC JRF NET Exam Kochi
Member, Governing Council, STIC, KSCSTE - CUSAT
Member, Executive Committee, STIC, KSCSTE - CUSAT
Member, Senate, CUSAT
Chairman, Board of Studies, Photonics, CUSAT
Member, Board of Studies, EEE,CUSAT
Member, Board of Studies, ECE, CUSAT
Member Secretary, Governing Body, LBSCST
Member Secretary, Executive Committee, LBSCST
Member, Advisory Committee, CSiS CUSAT
Member, Advisory Committee, IQAC CUSAT
Member, PG Board of Studies-Physics,Cal. University
Member Ex-Officio, BoG, TEQIP, LBSITW
Member, St. Equivalence Committee, CUSAT
Convener, Inspection Committee, CUSAT
Member, Research Guidance Committee, LBSCST
Member of various Selection Committees

Senior Professor
Nov '20 - Till date

Director
ISP CUSAT [Jul '16 - Jul '19]

Director
LBSCST [Jan '15 - Mar '16]

Joint Director
LBSCST [Jul '12 - Jan '15]

Professor
Nov '10 - Nov '20

Assoc. Professor
Nov '07 - Nov '20

Reader
Nov '04 - Nov '07

Lecturer/Sr. Lecturer
Nov '94 - Nov '04

- 2022 ***Member,Academic Council***
- 2021 **Member, IQAC & Core Committee**
- 2020 ***Steering Committee Member***
  NAAC-IQAC, CUSAT
- 2019 ***Senate, Ac. Council Member***
  Chairman BoS,Photonics, [July '19-Aug '19]
- 2017 ***Co-ordinator, Kochi***
  JRF/NET CSIR [Jun '17- Dec '18]
  Executive Committe Member,
- 2016 *Governing Counci Member*
  STIC, KSCSTE-CUSAT [Aug '17- Aug '20]
  Member, IQAC,CUSAT {July'15 - Jan '17}
- 2015 ***Exe. Comm. Member***
  APJ AK KTU [Jan '15 - Mar '16]
- 2012 ***Member,SAC, AICTE***
  [Jan '13 - May '14]
- 2011 ***Syndicate Member***
  CUSAT [Dec '11 - Sep '16]
- 2010 ***Head of Division***
  CUCEK [Sep '10 - Jul '12]
- 2008 ***NSS Program Officer***
- 2007 *[Jul '08 - Jan '12]*
- 2006 ***Syndicate Member***
  MG University [Jan '06 - Sep '06]
- 2004 *Dy. Warden, Men's Hostel ['95-'98]*
  Secretary, Co-Op Socitey ['95-'98]
  Secretary, PTA ['97-'99, '02-'03]
- 1994 *Editor, College Magazine ['96-'98, '03-04]*

Research Areas of Interest

Optical NDT	★★★★★
Speckle Metrology	★★★★½
Nano Photonics	★★★★☆
Bio Photonics	★★★☆☆
Wireless Ad-hoc Networks	★★★☆☆

Ph. D.	PDF	Publications	Courses/Sem Projects
Produced - 7	04	Total - 161	Organized - 24 Completed -04
Full Time - 6		J. Intl. - 75	Attended - 32 Applied - 05
Part Time - 2		J. Natl./Proceed. - 86	Presented - 92
		Invited Talks - 33	

Overseas Conferences

BINDT
United Kingdom

ASNT
USA

Professional Membership

Indian Society for Non Destructive Testing
Photonics Society of India
IEEE
Indian Science Congress Association
Society of Power Engineers (India)

DETAILED CURRICULAM VITAE

PROFESSIONAL PROFILE

Name	**A MUJEEB**
Address (Official)	**Senior Professor** **International School of Photonics** **Cochin University of Science and Technology** **Cochin University P. O** **Kochi-22** **Email: mujeeb@cusat.ac.in** **http://photonics.cusat.ac.in/dr-a-mujeeb/**
Qualifications	**Ph. D. in Optoelectronics** **M. Phil. in Applied Sciences** **M. Sc. Physics with Applied Electronics** **Post Graduate Diploma in Higher Education.**
Area of specialization	**Optoelectronics, Applied Electronics, Physics.**
Research Interests	**Optical NDT, Speckle Interferometry, Nanophotonics** **Biophotonics, Wireless ad hoc networks.**

PROFILE

Accomplished Academician with more than twenty seven years of teaching experience both in Engineering Colleges and in University departments. Good Administrator with ability to lead organizations under higher education. Active researcher in the field of Optoelectronics. Nurturing and maintaining excellent interpersonal relationship with all stakeholders. Strong leadership and conflict resolution skills to mange situations with effective co-ordination and delivering high quality solutions. Possess a flexible and detail oriented attitude. Good communication skills both in written and verbal. Possess a strong desire to achieve specified goals based on the qualification and experience.

AREA OF INTEREST

Interested in administration, teaching, research and development in Science, Technology and Engineering. Objective is to utilize the knowledge, skill and good interpersonal relationships acquired in higher education sector for the betterment of family, peer groups, students, research Scholars, the establishment in which working and to the society at a larger level. Confident in motivating the groups to create passion and compassion towards socially committed activities.

ACADEMIC PROFILE

 # School Topper throughout schooling up to SSLC.

 # Active Participant in extracurricular activities (Elocution/Essay/Drama etc.,) since schooling.

 # Consistently good academic record (either First class with Distinction or First Class).

 # SSLC First Class with Distinction March 1986.

 # Pre degree First Class, March 1988.

 # B.Sc., Physics First Class with Distinction, from University of Kerala, April 1991.

 # M.Sc. Physics with Applied Electronics specialization, First Class, from Department of Physics, University of Kerala, October 1993.

 # M.Phil. (Applied Sciences - Futures Studies) Grade A, from Department of Futures Studies, University of Kerala, July 1996.

 # Ph.D. in Optoelectronics (Research work done at Rocket Propellant Plant, Vikram Sarabhai Space Centre, Indian Space Research Organisation and at Department of Optoelectronics under the joint guidance of Dr. V R Ravindran, Manager, NDTF, RPP, VSSC, Trivandrum and Dr. V Unnikrishnan Nayar, Professor and Head, Department of Optoelectronics), from University of Kerala, Dec 2006.

 # Recognized Research Guide under Faculty of Technology and Faculty of Science, Cochin University of Science and Technology Kochi-22, India.

SPECIAL QUALIFICATION

Post Graduate Diploma in Higher Education (PGDHE) from Indira Gandhi National Open University (IGNOU) in December 2004.

ACADEMIC PROJECT WORK CARRIED OUT

#"Studies on Electronic Speckle Pattern Interferometry (ESPI) For Nondestructive Evaluation" (Ph.D) under the joint guidance of Dr. V U Nayar, Professor, Department of Optoelectronics, University of Kerala and Dr. V R Ravindran, Manager, NDTF, RPP, VSSC, ISRO, Trivandrum.

#"Preparation of Interdisciplinary Model for Teaching Physics to First Year Engineering Students" (PGDHE), under the guidance of Dr. J Exammal, Department of Education, University of Kerala-

#"Mathematical Model of Geothermal Power Station" (M.Phil) under the guidance of Dr. P Ramesan, Professor, Department of Physics, University of Calicut.

 # "Forecasting Chaotic Systems" (M.Phil) under the guidance of Dr. V Nandamohan, Professor and Head, Department of Futures Studies, University of Kerala, Trivandrum-

 # "Astronomical Image Processing" (M.Sc) under the guidance of Dr. Ajith Kembavi, Professor, Inter University Center for Astronomy and Astrophysics (IUCAA) Pune.

WORK PROFILE

Presently working as Senior Professor at International School of Photonics, Cochin University of Science and Technology, Kochi.

Director, International School of Photonics, Cochin University of Science and Technology, Kochi from 25th July 2016 to 25th July 2019.

Director, LBS Centre for Science and Technology, a Government of Kerala undertaking, established in 1971 having Engineering Colleges, Research and Consultancy wing, Software Engineering wing, Centre of Excellence in Disability Studies, various regional/sub centres across the state, etc., from 21st January 2015 to 2nd March 2016 (Under deputation from Cochin University of Science and Technology).

Joint Director LBS Centre for Science and Technology, from 12th July 2012 to 21st January 2015, had full charge of Academic/Research section of LBS Centre at head office, regional centers and sub centers, Full charge of administration and admission matters of Engineering Colleges under LBS centre, in charge of Instrumentation section of the centre, Centre of Excellence for Disability Studies (Under deputation from Cochin University of Science and Technology).

Senior Professor	-	**28th November 2020**	-	**till date**
Professor	-	**28th November 2010**	-	**27th November 2020**
Professor and Director ISP	-	**25th July 2016**	-	**25th July 2019**
Director LBSCST	-	**21st January 2015**	-	**2nd March 2016**
Joint Director LBSCST	-	**12th July 2012**	-	**21st January 2016**
Associate Professor	-	**28th November 2007**	-	**27th November 2010**
Reader	-	**28th November 2004**	-	**27th November 2007**
Senior Lecturer/Lecturer	-	**28th November 1994**	-	**27th November 2004**

ADMINISTRATIVE PROFILE

CURRENTLY

 # Member Internal Quality Assurance Cell (IQAC) with effect from 04th July 2021.

 # Member Core Committee IQAC with effect from 04th July 2021.

 # Member Academic Council, Cochin University of Science and Technology with effect from 22nd July 2022

 # Member, Standing Appellate Committee, AICTE, New Delhi with effect from23rd January 2013.

 # Member, Steering Committee, CUSAT NAAC Accreditation 2021, ith effect from 11th August 2020.

 # Member, Technical Committee, KIIFB Project, CUSAT with effect from 06th October 2017.

 # Member, DST- PURSE implementation group, CUSAT with effect from 09th October 2017.

FORMERLY

 # Director, International School of Photonics, Cochin University of Science and Technology: 25th July 2016 - 25th July 2019.

 # Director, LBS Centre for Science and Technology, Government of Kerala: 21st January 2015 - 02nd March 2016.

 # Joint Director, LBS Centre for Science and Technology, Government of Kerala: 12th July 2012 - 21st January 2015.

 # Member Syndicate Cochin University of Science and Technology: 24th December 2011 - 5th September 2016.

 # Member Secretary, Executive Committee and Governing Body of LBS Centre for Science and Technology January 2015 to March 2016-

 # Member of various standing committees (Academic, Staff, Finance, Works) and Convenor/ Member of (sub) committees (Physical Education, NAAC, KMSMS, CELOS, STIC, IUCNMD, CAT monitoring, Computerization of exam wing, propose new courses etc.) for making policy decisions in the capacity as Member Syndicate: 24th December 2011 to 5th September 2106-

 # Member, Executive Committee, Dr APJ Abdul Kalam Technological University Kerala: 21st January 2015 - 2nd March 2016-

 # Member, Syndicate and Senate, M.G University Kottayam: 21st January - 2nd September 2006.

 # Co-coordinator CSIR NET-JRF Examinations Kochi, June 2017, December 2017, June 2018, December 2018.

 # Member, Executive Committee and Governing Council, STIC: 14th August 2017 – 13th August 2020.

 # Member, Senate Cochin University of Science and Technology 24th December 2011 - 19th August 2020.

 # Member, Academic Council, CUSAT: 24th December 2011 – 19th August 2020.

 # Member, Standing Appeal Committee, Dr APJ Abdul Kalam Technological University Kerala January 2016 - December 2016-

 # Member, Advisory Committee, Centre for Science in Society, CUSAT, July 2015 - Sept 2016-

 # Member Advisory Committee, Internal quality Assurance committee, CUSAT, July 2015- Jan 2107.

N.S.S Programme Officer: 8th July 2008 - 9th January 2012.

Head, Division of Applied Sciences, CUCEK: 1st September 2010 - 11th July 2012.

Co-ordinator, Division of Science and Mathematics: 2003-2007-

Secretary, Parent Teachers Association: 1997-1999, 2002 – 2003.

Secretary, College Co-operative Society: 1995 -1999.

Deputy Warden, College Men's Hostel: 1995-1998.

CO/EXTRA -CURRICULAR ACTIVITIES

CURRENTLY

Member Faculty of Technology, CUSAT, with effect from24th November 2011.

Member, Board of Studies in Forensic Sciences, CUSAT, with effect from 11th March 2020.

Member Board of Studies in Photonics, CUSAT with effect from 16th August 2012.

#Member, Academic and CBCS Committees, CUSAT with effect from 18th July 2016.

Member, Executive Committee, Indian Society for Nondestructive Testing, Thiruvananthapuram chapter. 2014 onwards-

Question setter and External Examiner for B.Tech/M.Sc/M.Tech/M.Phil/Ph.D degree programmes under various Universities in Kerala-

Selection/ Screening Committee Member for various teaching posts-

FORMERLY

Chairman, Board of Studies, Photonics, CUSAT 23rd July 2019 - 19th August 2020.

Member, National Advisory Committee, 26th, 27th and 28th DAE – BRNS National Laser Symposium held during December 2017, December 2018 and January 2020-

Member, Assurance Committee, Senate, Cochin University of Science and Technology 2020.

Co-ordinator, Curtain Raiser Programme, CUSAT, Kerala Science Congress, January 2018-

Co-ordinator, Students Programme for Excellence in Experimental Design (SPEED), Science to Ignite Inspirations (SIGN IN) sponsored by KSCSTE organized at International School of Photonics from 14th to 18th February 2017.

Member Board of Studies in Electronics and Communication Systems, under Faculty of Technology, CUSAT with effect from 10th August 2015 to 9th August 2019.

 # Convenor, Student induction Programme 2019-20.

 # Faculty of Techonolgy Co-ordinator for Sasthrayan 2018.

 # Member Board of Studies in Electrical & Electronics Engineering under Faculty of Engineering, CUSAT with effect from 10th August 2015 to 9th August 2019.

 # Member PG Board of Studies in Physics, University of Calicut: 27th April 2013 – 26th April 2016.

 # Member, Ex-Officio, Board of Governors, TEQIP. LBSITW Thiruvananthapuram July 2012 – March 2016-

 # Member, Statutory Equivalence Committee under Faculty of Technology, CUSAT. 2012-2015.

 # Member Steering and Research Advisory Committees, Centre for excellence in Disability Studies, under LBSCST, Govt. of Kerala. 11th February 2013 - 2nd Mar 2016.

 # High Level Inspection Committee Member in the team constituted by the Vice-Chancellor, CUSAT, to visit the recognized institutions of the University for the assessment of facilities for provisional recognition (Convenor/ Member for more than 40 inspection teams) 2006 - 2016-

 # Selection Committee Member for research fellowships in Science for meritorious students (UGC-BSR) – at International School of Photonics, CUSAT. 2014.

 # Member, Research Guidance Committee, LBSITW. 2012-2016-

 # Staff Editor, College Magazine: 1996-98, 2003-2004-

MEMBERSHIP OF PROFESSIONAL BODIES

 # Member IEEE Kerala Section (No.9775476) New York, USA.

 # Life Member (No. 188) Photonics Society of India (PSI).

 # Life Member (No. 7025), Indian Society for Nondestructive Testing (ISNT).

 # Associate Member (No. 4223), Society of Power Engineers (SPE).

 # Life Member (No.15451), Indian Science Congress Association (ISCA).

PROJECT / ASSIGNMENT COMPLETED FOR GOVERNMENT OF KERALA/CUSAT

KSCSTE E&E Project Development of Laser Bio-Speckle Technique for Monitoring Biological Activities of Plants, Vegetables and Fruits for Rs 16 Lakh. (2015-19).

KSCSTE WSD Student Programme for Excellence in Experimental Design (SPEED) Science to Ignite Inspirations (SIGN IN) for Prathibha Scholars for Rs 327750/ (2017).

Conduct of CSIR UGC JRF/ Lectureship Examination during June 2017 to December 2018 Kochi, for Rs 8000000/ (2017-18).

Conduct of Academic Induction Programme for 2019-20 Batch - Rs 200000/ (2019).

PROJECTS SUBMITTED SUBMITTED TO GOVERNMENT OF INDIA/KERALA

 # Detailed project report to establish an Inter University Centre for Assistive Rehabilitation Engineering (IUCARE) Engineering at CUSAT, submitted to the government of Kerala, 4.5 Cr., 2021.

 # Establishment of CENTRE FOR ASSISTIVE REHABILITATION ENGINEERING (CARE) Project proposal submitted to University Grants Commission New Delhi under Scheme for Trans-disciplinary Research for India's Developing Economy (STRIDE) 2019.

 # "Design and Development of Navigation Software Tools for Enhanced Living of Visually Impaired and differently abled" submitted to TIDE scheme, DST, Government of India for Rs 422500 (2019).

 # "Development of 3D Electronic Laser Speckle Pattern Interferometry setup for structural testing analysis submitted to RUSA, MHRD Government of India for Rs 1240000/ (2018).

 # "Development of dynamic laser speckle imaging technique for the assessment and monitoring of certain biological processes" submitted to Ecology and Environment scheme, KSCSTE, Government of Kerala for Rs 241200 (2018).

PHYSICAL OVERSEAS PRESENTATIONS

 # St Luis, M. O. United States of America during May 2010 for an invited talk on NDT international conference organized by American Society for Nondestructive Testing with financial assistance from University Grants Commission (UGC) and Indian National Academy of Sciences (INSA) New Delhi.

 # Manchester, United Kingdom during June 2014 for an invited talk on Condition Monitoring organized by the British Institute of Non Destructive Testing with financial assistance from University Grants Commission (UGC), Indian National Academy of Sciences (INSA) and Council of scientific and Industrial Research (CSIR) New Delhi.

RESEARCH AND CURRICULAR ACTIVITIES

 # Guiding research scholars leading to Ph.D. in Photonics at international School of Photonics, Cochin University of Science and Technology.

 # Teaching M.Tech. Optoelectronics and Laser Technology – Subject: Nanophotonics, (2009-12), Optoelectronics, (2016-22), Laser Applications (2016-22).

 # Teaching M.Sc. Photonics (Five Year Integrated) - Subject: Geometrical Optics, Optoelectronics II, Nanophotonics. (2009-12), History of Science and Technology (2021-22).

 # Teaching B.Tech. (Mechanical Engineering. Electronics and Communication Engineering, Electrical and Electronics Engineering, Computer Science and Engineering, Information Technology) Subject:

Engineering Physics (Theory and Lab), Basic Electronics, Optical Instrumentation, Humanities (1994-2012).

DETAILS OF Ph.D GUIDANCE

AWARDED

1. **Investigations on TiO_2 based nanocomposites as potential photonic Materials, Ms. Divya S (Reg. No : 3997, DoJ : 28.07.2010), with Co guide: Dr P Radhakrishanan, Professor, ISP. Awarded Ph.D. on 29th February 2016.**

2. **Investigations on optical characteristics of certain dyes with silver nano particles for photonic applications. Mrs. Bini Pathrose (Reg. No : 4036, DoJ : 11.08.2011) with Co guide: Dr P Radhakrishanan, Professor, ISP. Awarded Ph.D. on 04th January 2018.**

3. **Investigations on laser speckle techniques for certain engineering and biological Applications Mr. Retheesh R (Reg. No : 3996, DoJ : 28.07.2010), with Co guide: Dr P Radhakrishanan, Professor, ISP. Awarded Ph.D. on 22nd November 2018.**

4. **Investigations on synthesis and characterization of CdSe and CdSe-ZnSe nanostructures for photonic applications. Mr. Boni Samuel (Reg. No: 4645, DoJ: 06.02.2014) with Co guide Dr V P N Nampoori, Professor Emeritus, ISP. Awarded Ph.D. on 27th July 2021.**

5. **Modeling and detection of certain flooding based denial-of-service attacks in wireless ad hoc networks Mr. Nishanth N (Reg. No:5759, DoJ: 25.04.2018). Awarded PhD on 31st January 2022.**

6. **Passive acoustic classification of underwater targets using unsupervised representation learning schemes Mr. Satheesh Chandran. C (Reg. No: 4840 DoJ: 16.07.2014) with Guide: Dr Supriya, Professor, Department of Electronics. Awarded Ph.D on 11th April 2022.**

7. **Investigations on laser assisted synthesis and Plasmon enhanced linear and non linear optical properties of mono and bimetallic nano particles of gold, silver and platinum Ms Fathima R (Reg.No 5444, DoJ: 01.07.2017). Awarded PhD on 31st August 2022.**

ON GOING

8. **Studies on synthesis and characterization of certain bismuth oxide nanocomposites for photonic applications. Mr. Adrin Antony Correya (March 2014) with Co guide Dr V P N Nampoori, Professor Emeritus, ISP.**

9. **Nanomaterials for Photonic applications synthesis, characterization and device applications. Mr. RajSha M.M (January 2016) with Co-guide: Dr V P N Nampoori, Professor Emeritus, ISP.**

10. **Synthesis and characterization of certain dyes for Optoelectronic Applications. Ms. Anitha Prakash, (July 2016) with Co-guide: Dr P Radhakrishanan, Emeritus Professor, ISP.**

11. **Synthesis and Characterisation of certain metal nano particles for optoelectronic applications Mr Pradeep Kumar (November 2016) with co guide: Dr P Radhakrishanan, Emeritus Professor, ISP.**

12. **Studies on Laser Speckle Techniques for Metrology. Mrs Keerthana S H (February 2017) with co guide: Dr P Radhakrishanan, Emeritus Professor, ISP**

13. **Cloud based respiratory diagnostics Mrs Chandrakanta A S (December 2017) with Guide: Dr Supriya, Professor, DoE.**

14. **Synthesis and Characterization of selected nanoparticles and its composites for photonic applications Adarsh K J (April 2018).**

15. **Modelling, simulation and experimental, validation of certain laser speckle imaging techniques. Sooraj Viswam A K (July 2018).**

16. **Investigations on design, fabrication and characterization of certain epsilon-near-zero metamaterials Muhammad Rishad K P (October 2021).**

17. **Studies on titanium based nanocomposites for optoelectronic applications Shanto T A (August 2022)**

18. **Investigations on biosynthesized noble metal nanoparticles for photonics applications Betsy Susan Abraham (August 2022)**

POST DOCTORAL FELLOWS

1. **Dr Mathew, UPDF (2016-2019)**
2. **Dr Md Zaheer Ansari, UPDF (2017-2020)**
3. **Dr Md Zaheer Ansari, RPDF (2020 -2021)**
4. **Dr Bini P Pathrose, UPDF (2021 onwards)**

UGC / AICTE / GOVERNMENT OF KERALA SPONSORED WORKSHOP/ REFRESHER COURSES ATTENDED

1. **Journal Citation Reports Certification Series (JCR), Clarivate, 8th July 2021.**

2. **Workshop on Universal Human Values on the theme "Inculcating Universal Human Values in Technical Education" during 11-15 May 2020 organized by AICTE.**

3. **Workshop on Science, Technology and Innovation Policy organized by Centre for Development Studies on 31st August 2013.**

4. **Annual Photonics Workshop (APW) sponsored by UGC at International School of Photonics, Cochin University of science and Technology on 28th February 2012.**

5. **Workshop on e-governance conducted by AICTE at College of Engineering Thiruvananthapuram on 14th November 2011.**

6. **Short term Course for Science Research Guides sponsored by U G C, at Academic Staff College, University of Kerala from 17th Oct 2011 to 21st Oct 2011.**

7. **Annual Photonics Workshop (APW) on Reent Trends in Fiber Optics and its Applications sponsored by UGC at International School of Photonics, Cochin University of science and Technology from 27th to 28th February 2011.**

8. **National Workshop on Optoelectronics and Optical Communication (NWOOC-2011) organized by Department of Optoelectronics, University of Kerala during 5-6 January 2011.**

9. **Stimulating Teachers through Advanced Training Programme (STAT) for college teachers on Recent Trends in Photonics held from 27-09-2010 to 01-10-2010, jointly organized by Cochin University of Science and Technology and UGC-Academic Staff College, University of Kerala, sponsored by Government of Kerala.**

10. **Orientation Course for the NSS Programme Officers of the National Service Scheme organised by the NSS Training and Orientation Centre Kerala at Rajagiri College of Social Sciences, Kalamasseri, Kochi during 4 –13 August 2009.**

11. **Short Term Course on Advances in Nanotechnology, organized by the Centre for Continuing Education and sponsored by Technical Education Quality Improvement Programme, Govt.of India at Sree Chitra Tirunal College of Engineering, Thiruvananthapuram during 5-14 January 2009.**

12. **Workshop on Science Communication Through Cultural Events, organized by Swadeshi Science Movement and Rashtriya Vigyan Evam Prodyogiki Sanchar Parishad (NCSTC) during 5-9 December 2008.**

13. **Workshop on curriculum development conducted for restructuring of M.Tech/MPhil syllabus as a special invitee during 27-28 February 2008 organised by the Department of Optoelectronics, University of Kerala.**

14. **Refresher Course in Physics (Optics-Optoelectronics) sponsored by U G C, at Academic Staff College, University of Kerala from 14th Feb 2007 to 7th March2007.**

15. **National worshop on Technology Enhanced Learning for Enriching Engineering Education jointly organized by National Programme on Technology Enhancement Learning, Indian Institute of Technology, Madras and Indian Institute of Information Technology and Management Kerala on 5th and 6th January 2007 at Techno park, Thiruvananthapuram.**

16. **State level two day workshop on the Science and Technology of Non Destructive Evaluation and Application of Spectroscopy on November 12th and 13th 2004 at St Aloysius College Edathua organized by ISNT Thiruvananthapuram Chapter and Department of Physics, St Aloysius College Edathua.**

17. **Refresher Course in Physics sponsored by U G C, at Academic Staff College, University of Kerala from 14th July 2004 to 3rd August 2004.**

18. **National Workshop on Recent Trends in Optoelectronics and Optical Communication (WOOC) organized by Department of Optoelectronics, University of Kerala during 26-18 May 2004.**

19. **Annual Photonics Workshop (APW) on Recent Trends in Optics sponsored by UGC at International School of Photonics, Cochin University of science and Technology from 27th to 28th February 2004.**

20. **Refresher Course in Physics sponsored by U G C, at Academic Staff College, University of Kerala from 27th January 2004 to 17th February 2004.**

21. **Refresher Course in Physics sponsored by U G C, at Academic Staff College, University of Kerala from 26th July 2002 to 16th August 2002.**

22. **ILA Course on (i) Optical properties of Semiconductor dots (ii) Semiconductor Optoelectronic Devices for quantum wells to Bloch Oscillators and Quantum Cascade lasers conducted by Indian Laser Association at Centre for Advanced Technology Indore on 18th December 2001.**

23. **Short Term Course on The Application of Transform Theory to Optics and Optical Communication organized jointly by the Department of Mathematics and Optoelectronics, University of Kerala at Kariavattom Campus from 29th October to 3rd November 2001.**

24. **Workshop on R & D Perspectives in Nondestructive Evaluation Technology held on 17th February 2001at Department of Physics, University of Kerala under the auspices of Indian Society for Non Destructive Testing Thiruvananthapuram Chapter and Department of Physics, University of Kerala.**

25. **Workshop on Astronomical Image Processing and the Internet organized by the Inter University Centre for Astronomy and Astrophysics Pune and University of Kerala at the University Observatory, Observatory Hills, Thiruvananthapuram during December 20-24, 1996.**

26. **Regional School of Introductory Astronomy conducted during March 10-15, 1993 at Department of Physics in association with the University Observatory, Trivandrum.**

PUBLICATIONS/PRESENTATIONS

Books/Chapters

1. **Application of biospeckle Laser method for drug testing parasites, Chapter 9, Part II Research Papers, Advanced Studies in Experimental and Clinical Medicine, Modern Trends and Latest Approaches, CRC Press, Taylor & Francis Group, Apple Academic Press USA , First Edition 2021.**

2. **Proceedings of National Photonics Symposium 2019, 27Feb-1March 2019, ISBN: 978-81-936217-8-3, Published by The Directorate of Public Relations and Publications, Cochin University of Science and technology, Kochi, Kerala. Chief Editor (2019).**

3. **Proceedings of National Photonics Symposium 2018, 27Feb-1March 2018, ISBN: 978-81-936217-0-7, Published by The Directorate of Public Relations and Publications, Cochin University of Science and technology, Kochi, Kerala. Chief Editor (2018).**

4. **Proceedings of National Photonics Symposium 2017, 27Feb-1March 2017, ISBN: 978-93-80095-92-9, Published by The Directorate of Public Relations and Publications, Cochin University of Science and technology, Kochi, Kerala. Chief Editor (2017).**

Journals

1. **M M Rajsha, K P M Rishad, V Pradeep Kumar, V P N Nampoori and A Mujeeb " Laser assisted synthesis of Si-Au nanocomposites with trisodium citrate and their enhanced nonlinear optical properties (2022) https://doi.org/10.1007/s10854-02209162-0**

2. **Prakash, Anitha, Jith C. Janardhanan, Vakayil K. Praveen, P. Radhakrishnan, and A. Mujeeb. "Multimode laser emission from BODIPY dye-doped polymer optical fiber." Journal of Luminescence 252 (2022): 119343.**

3. **Jancy John, Vinoy Thomas, Sujesh Baby, Ramakrishnan Jayakrishnan, Sebastian Mathew, Ibrahimkutty Rejeena, Abdulhassan Mujeeb, " Open-aperture Z scan and optical limiting of plasmonicsilver-polymer system", Journal of Optoelectronics and Advanced Materials, 24 (2022) p 250-255**

4. **Adrine Antony Correya, Abdul Nadeer, V P N Nampoori, A Mujeeb, "The effect of polyethylene glycol on the formation of bismuth titanate nanosheets and its effect on optical charecteristics" Journal of Cluster Science (2022) https://doi.org/10.1007/s10876-022-02290-x.**

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107. A Mujeeb, ELSI for ST, Photonics News, Vol. 21, February 2020, International School of Photonics, Cochin University of Science and Technology (2020).

108. Adrine Antony Correya, Abdul Nadeer, V P N Nampoori and A Mujeeb, "Sol-Gel synthesis of bismuth titanate for novel thermal application" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

109. Anitha Prakash, Bini P Pathrose, P Radhakrishnan and A Mujeeb, "Concentration dependent laser induced fluorescence emission from neutral red" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

110. Boni Samuel, V P N Nampoori and A Mujeeb, "Fluorescence quenching in CdSe quantum dots" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

111. Fathima R and A Mujeeb, "Tailoring of surface Plasmon resonance through laser synthesized gold-silver alloy nanoparticles" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

112. Keerthana S H, Fathima R and A Mujeeb, "Concentration dependent optical studies of laser ablated colloidal gold nanoparticles using dynamic laser speckle technique" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

113. M M Raj Sha, V P N Nampoori and A Mujeeb, "Amine functionalized water soluble silicon nanoparticles: optical properties" at National photonics symposium (NPS - 2019), International School of Photonics, CUSAT from 27 February to 1 March 2019. ISBN 978-81-936217-8-3.

114. Adrine Antony Correya, Mathew S, V P N Nampoori, A Mujeeb "Pyrochlore bismuth bitanate synthesized through alchohol nitration method for enhanced absorption and emission" at National photonics symposium (NPS - 2018), International School of Photonics, CUSAT from 27 February to 1 March 2018. ISBN 978-81-936217.

115. Fathima R, S Mathew, A Mujeeb "Stability study of gold nanoparticle in an aqueous solution of CTB", Proc. National Photonics Symposium, International School of Phoronics, CUSAT, February 2018.

116. Jancy John, Raji Mary John, R Jayakrisnan, Titu Tomas, Vinoy Thomas, Rani Abraham" carbon Quantum Dots for tunable light emission" at National photonics symposium (NPS - 2018), International School of Photonics, CUSAT from 27 February to 1 March 2018. ISBN 978-81-936217.

117. Anitha Prakash, Bini P Pathrose, P.Radhakrshnan, A. Mujeeb " Effects of laser ablated gold nanoparticles on the thermal diffusivity of neutral red dye" Proc. National Photonics Symposium 2018.

118. Anitha Prakash, Bini P Pathrose, Vijesh K.R, P.Radhakrshnan, A. Mujeeb " Measurement of thermal diffusivity of neutral red dye using dual beam thermal lens technique", Proc. National Laser Symposium(NLS-26), BARC, Mumbai, 20-23 Dec,2017.

119. M M Rajsha, S Mathew, S. Udayan, Ishaq Ahmed, V P N Nampoori, A. Mujeeb "Thermo-optical studies of CuInGaSe nanocrystals using laser induced mode-matched thermal lens technique", Proc. National Laser Symposium(NLS-26), BARC, Mumbai, 20-23 Dec,2017.

120. Satheesh Chandran C, Suraj Kamal, A.Mujeeb, Supriya. M.H. "An SVM based underwater target classifier utilizing unsupervised neural networks for performance enhancement and novelty detection", Proc. ASPIRE-17, MACE, Thiruvananthapuram.

121. Retheesh R, Boni Samuel, Bejoy Varghese, P Radhakrishnan, A Mujeeb, "Monitoring biospeckle activity using principal component analysis", Proc. National Photonics Symposium 2017.

122. Boni Samuel, Mathew S, Anand V R, Adrine Antony Correya, V P N Nampoori, A Mujeeb "Optical characteristics of CdSe quantum dots", Proc. National Photonics Symposium 2017.

123. Jancy John, R Jayakrishnan, Titu Thomas, Vinoy Thomas, Jeena Thomas, Prakash P, Rejeena I, Mathew S, A Mujeeb, "Optical Limiting and Thermal Lensing of Polymer Stabilized Silver Nanoparticles", Proc. National Photonics Symposium 2017.

124. Boni Samuel, Retheesh R, and A Mujeeb "Development of a low cost and indigenous laser biospeckle technique for the detection and analysis of pesticides in vegetables and fruits" Proc. 29th Kerala Science Congress, Jan. 28-30 2017.

125. Bini Pathrose, VPN Nampoori, P Radhakrishanan, A Mujeeb "Enhancement in the optical limiting performance of Basic Fushin dye in the presence of colloidal silver nanoparticles". Proc. National Laser Symposium(NLS-25), KIIT, Bhubneswar, 20-23 Dec,2016.

126. Boni Samuel, Retheesh R,V. P. N Nampoori, and A Mujeeb "Nondestructive Evaluation of fruits using cross correlation and time history of biospeckle pattern", Proc. NDE2016, 26th National seminar and International Exhibition on nondestructive Evaluation Thiruvananthapuram, 15-17 December 2016 pp 470-473.

127. Retheesh. R, Boni Samuel, P. Radhakrishnan, and A Mujeeb "Statistical processing of speckle patterns for non-destructive evaluation of engineering and biological samples", Proc. NDE2016, 26th National seminar and International Exhibition on nondestructive Evaluation Thiruvananthapuram, 15-17 December 2016 pp 478-484.

128. **Boni Samuel, Mathew S, Sangeeth Soman, Adrine Correya, Anand V R, Jaison Peter, V P N Nampoori, A Mujeeb " Optical nonlinear studies on CBD grown CdS thin films", Proc. National Photonics Symposium and workshop, ISP, Feb 2016.**

129. **Bini Pathrose, V P N Nampoori, P Rdhakrishanan, A Mujeeb, Optical limiting characteristics of Basic Fuchsin" Proc. National Photonics Symposium and workshop, ISP, Feb 2016-**

130. **R. Retheesh, Boni Samuel, P. Radhakrishnan, V.P.N. Nampoori, A. Mujeeb "Numerical processing Techniques for the detection and analysis of Biospeckle activity", Proc. 2nd NCACICT- Feb 2016, pp.153-156.**

131. **Boni Samuel, Retheesh R, Adrine Correya, Jaison peter, Anand V. R., V. P. N Nampoori, Beela G. K. and A Mujeeb "Detection and analysis of physical damages in fruits using laser biospeckle technique", 28th Kerala Science Congress, Jan. 28-30 2016. Pages: 473-483.**

132. **Bini Pathrose, V P N Nampoori, P Radhakrishnan, A Mujeeb, Role of Femtosecond laser ablated Silver Nanoparticles in the fluorescence properties of 4-[(4-Aminophenyl)-(4-imino-1-cyclohexa-2, 5- dienylidene) methyl] aniline Hydrochloride, National Laser Symposium (NLS-24), RRCAT, Indore, December (2015)-**

133. **Boni Samuel, Retheesh R, Adrine Correya, Jaison peter, Anand V. R., V. P. N. Nampoori, G. K. Beela and A. Mujeeb. "Application of biospeckle method for the detection and analysis of damages in fruits", 25th Swadeshi Science Congress, Dec. 15-18 2015-**

134. **Bini Pathrose, V P N Nampoori, P Radhakrishanan, A Mujeeb,"Thermal diffusivity A study on concentration effects", National Seminar on Advanced materials and their applications, Aquinas College Edacochin, Cochin, September 2015-**

135. **Retheesh R, Boni Samuel, P. Radhakrishnan, V. P. N. Nampoori, and A. Mujeeb "Application of digital holography for NDE of metallic tubes using thermal loading", Proc. NDE2015, Hyderabad November 26-28,2015.**

136. **Boni Samuel, Retheesh R, A.Mujeeb and V.P.N.Nampoori "laser bio-speckle technique for the assessment of fruit ripening", Proc.24th Swadeshi Science Congress, 6-8, Nov 2014, ISBN 978-81-928129-2-2, pages 753-757.**

137. **Bini Pathrose, V P N Nampoori, P Radhakrishnan, A Mujeeb "Fluorescence Quantum Yield of Methylene blue using dual beam thermal lens technique". APW 2014, CUSAT, Cochin, February 2014-**

138. **Bini Pathrose, V P N Nampoori, P Radhakrishnan, A Mujeeb,"Thermal Diffusivity measurement of Fuchsin dye by dual beam thermal lens technique", National Laser Symposium(NLS 22)., MIT, Manipal, Karnataka, January 2014.**

139. **Bini Pathrose, A Mujeeb,"Optical Characterization of Silver nanoparticles by Laser Ablation", National Seminar on Recent Trends in Conducting Polymers and Polymer nanostructures, Aquinas College Edacochin, Cochin, August 2013-**

140. **Subham Chandel, Ajan. P. R, A. Mujeeb. V.P.N.Nampoori, "Characterisation of CdS and Ag doped CdS thin film prepared through chemical bath deposition technique". Natinal**

Seminar on Current Trends in Material Science. Sponsored by University Grants Commission, in collaboration with SPAP, MG University, at NSS Hindu College, Changanassery, 7-8, March 2012

141. Bini Pathrose, V P N Nampoori, P Radhakrishnan, A Mujeeb Optical characteristics of Methylene Blue sensitized Poly Vinyl Alcohol for holographic applications, Recent trends in Photonics, Annual Photonics Workshop (APW 2012), CUSAT, Cochin (February 2012)-

142. S. Divya, Indu Sebastian, V. P. N. Nampoori, P. Radhakrishnan, A. Mujeeb, "Nonlinear Optics of Tio2- Sio2 Nano Composites", RANET-2011, Gwalior (Ranet-11) 19th - 20th November, 2011.

143. Kavitha K. G, Upkar Kumar, Retheesh R, A. Mujeeb, P Radhakrishnan, V.P.N.Nampoori, "Design and realization of solar internal lighting system for homes and office spaces". Proc. National Conference on Emerging areas of Photonics and Electronics, Kolkata, pp 60-64, September 2011.

144. A Mujeeb "Measurement and analysis of surface roughness properties of low modulus materials using speckle photography", Image, Vol.26. No.3, December 2010.

145. Sidharth Joshi, A. Mujeeb, V. N. N. Nampothiri. P .Radhakrishnan, V. P. N. Nampoori, "Application of Speckle photography for the analysis of surface roughness properties: an indigenous and low cost approach" Proc NLS 09-

146. A. Mujeeb, V .P. Mahadevan Pillai, V.U Nayar, V. R Ravindran "Effect of Young's modulus on holographic fringe pattern: A simulation study" NSPM 2009

147. K Kochunarayanan, A. Mujeeb,, V.P. Mahadevan Pillai, V.U Nayar , "Speckle intensity profilometry : A method for surface roughness measurement" Proc (NLS) 2007-

148. A. Mujeeb, V.U . Nayar, V.R Ravindran "Speckle de-correlation study of low modulus material Using thermal loading technique", NCOL 2007.

149. K Kochunarayanan , A. Mujeeb,, V.P. Mahadevan Pillai, V.U Nayar, V. R Ravindran, "Real time roughness measurements of different surfaces using speckle intensity profilometry" NCOL 2007.

150. A. Mujeeb, V.R Ravindran, V.U . Nayar "Theoretical study on the effect of mechanical properties on the holographic interferogram". Proc. NDE 2006, pp 361-364.

151. A. Mujeeb, V.R Ravindran, V.U . Nayar, "A method for real time and continuous acquisition of interferogram of ESPI for non-destructive evaluation" Proc. NDE 2006, pp 357-360.

152. A. Mujeeb, V.R Ravindran, V.U . Nayar "A fringe sharpening method for the analysis of interferogram of ESPI for NDE", Proc. National Seminar on NDE, 2005-

153. A. Mujeeb, K kochunarayanan, V.P. M. Pillai, V.U Nayar "Design of an indigenous low cost vibration less optical table for effective interferometry analysis" in Proc. XXVIII O S I Conference on Optics and Photonics Engineering (COPE-03) 2003.PP 10-14.

154. A. Mujeeb, V.R Ravindran, V.U . Nayar , "Speckle Non Destructive Testing (SNDT) of Low Modulus Materials" in DAE-BRNS National Laser Symposium 2002 . ISBN 81-7764-378-9, Proc. PP 275-276.

155. A Mujeeb, A, Ravindran .V.R . , Nayar .V.U. "Studies on TV holography for the Nondestructive Evaluation (NDE) of space vehicle components" Proc. Kerala Science Congress2002. ISBN81-86366-36-9, Pages 498-501.

156. A. Mujeeb, V.P.M.pillai, , V.R Ravindran, V.U . Nayar "Detection of defects in low modulus materials using out of plane Electronic Speckle Pattern Interferometry" Proc. National Laser Symposium 2001. ISBN 81-7764-229-4, Pages 185-86.

157. A. Mujeeb, V.R Ravindran, V.U . Nayar , "Electronic Speckle Pattern Interferometry (ESPI) for the Nondestructive Evaluation of Low modulus materials" .Proc. National Seminar on Non Destructive Evaluation and Exhibition 2001.

158. A. Mujeeb, V. R Ravindran, V. U . Nayar . "Electronic Speckle Pattern Interferometry (ESPI) techniques applied to Non Destructive Testing" National Seminar on Spectroscopy, Optoelectronics & Nondestructive Evaluation (SPENDE) 2001

159. A. Mujeeb, V.R Ravindran, V.U . Nayar , "Laser Speckle Interferometry Techniques for Non destructive Evaluation" National Seminar on the Millennium Industry and Non destructive Evaluation (NDE) 2000-

160. A. Mujeeb, V.R Ravindran, V.Unnikrishnsn Nayar . "The effect of rigid body and object geometry in the holographic interferogram" Proc. National Seminar on Non destructive Evaluation and Life extension 1997.

161. V. R Ravindran, A. Mujeeb, V. Unnikrishnsn Nayar, "HNDT using mechanical loading : A theoretical analysis on the effect of rigid body displacement" Proc. National seminar on Nondestructive Evaluation and Life Extension 1997.

INVITED SPEAKER/RESOURCE PERSON : /TALK/ABSTRACTS

1. Resource Person for Orientation Programme " NAAC Need and Process" at International School of Photonics on 30th September 2022

2. Resource Person / Key Note Address on "Photonics, prakasam upayogichulla Sankhethikavidya" for Science Day Inauguration at Brahmanadodayam Sanskrit U P School Kalady SNDP on 21st July 2022-

3. Resource Person/ Key Note Address on "Sasthravum Gaveshanavum"for Science Day Inauguration at SNDP High School Neeleeswaram on 13th July 2022-

4. Resource person in the TEQIP-II sponsored Faculty Development Program on Recent Trends in Bionanoelectronics organized by LBS Institute of Science and Technology for Women, Poojappura, Thiruvananthapuram, delivered talk on "Biophotonics" on 25th March 2022.

5. **Guest Speaker in the AICTE ATAL sponsored Faculty Development Program organized by Sree Shankaracharya Group of Institutions, Bhilai Chhattisgarg, delivered a talk on "Nanophotonics" on 1st February 2022.**

6. **Resource person in the AICTE ATAL sponsored Faculty Development Program organized by MES College of Engineering, Kuttippuram, delivered a talk on "Speckle Metrology" on 23rd September 2021.**

7. **Resource person in the AICTE ATAL sponsored Faculty Development Program organized by MES College of Engineering, Kuttippuram, delivered a talk on "Optical NDT" on 22nd September 2021.**

8. **Invited Speaker in the Online line session for the BSc honors Physics students of Punjab University, Chandigarh, "Developments on Interferomtery Techniques after Holography" on 5th June 2021.**

9. **Resource person in the TEQIP-II sposored Faculty Development Program organized by LBS Institute of Science and Technology for Women, Poojappura, Thiruvananthapuram, delivered talk on "Photonics-Technology using Light: Thrust areas of Research and Prospects" on 9th November 2020.**

10. **Resource person for refresher course, lecture delivered on "Laser assisted non destructive testing and synthesis of materials" at UGC HRDC University of Kerala on 28th November 2019.**

11. **Special address at Investiture Ceremony at Najath Public School Kalamassery, Kochi, on 29th July 2017.**

12. **Resource Person for refresher course, Lecture delivered on "Laser Assisted non-destructive testing of materials" at Department of Physics, Payyannur Campus, organized by UGC HRDC Kannur University on 14th March 2017.**

13. **Resource Person for refresher course Lecture delivered on "Ultra fast lasers for nano material synthesis" at Department of Physics, Payyannur Campus, organized by UGC HRDC Kannur University on 14th March 2017.**

14. **Invited Lecture on "Laser speckle techniques for non-destructive evaluation of materials" at CAPE College of engineering, Kidangur on 7th March 2017.**

15. **Invited talk on "CV Raman: The legend who placed India on World Science Map" during National Science day celebrations at HHMSPB NSS College for Women Neeramnakara, Thiruvananthapuram on 20th February 2017.**

16. **Special Lecture on "Photonics - Technology using light" Sign In SPEED programme sponsored by KSCSTE organized at International School of Photonics for Prathibha Scholars on 15th February 2017.**

17. **Special Address at 26th National seminar and International Exhibition on nondestructive Evaluation, Thiruvananthapuram, 15-17 December 2016**

18. **Resource Person for refresher course, delivered lecture on "Laser Assisted synthesis of materials" at UGC HRDC University of Kerala on 14th December 2016.**

19. **Invited talk on "Experimental and Theoretical Studies on Electronic Speckle Interferometry for Non-Destructive Evaluation" nCORTech16, LBS College of Engineering Kasargode during February 2016 (Chief Organiser)**

20. **Invited talk on the topic "Towards Better Teaching", Orientation for Contract Teachers at LBSITW on 25th October 2013.**

21. **Special lecture on "Empowering Young Engineers", One day Technical Workshop conducted by Techfed Kerala, at Kochi on 23rd December 2012.**

22. **Invited speech on "World of Electronics: Brief Prospects and Analysis",Principia-012, at Hassan Haji Memorial JDT Islam Polytechnic College on 6th September 2012.**

23. **Invited talk on "Science and Society", Orientation for School students at Markaz. Ernakulam on 10th April 2012.**

24. **Invited speaker, delivered talk on "Sir C V Raman, The legend who placed India on World Science Map", National Science day Lecture - at Devaswom Board Pampa College, Parumala, Mannar on 6th March 2012.**

25. **Article on "Optoelectronics for Nondestructive Testing", CKCT, Annual Meet Report, March 2012.**

26. **Article "Laser: The Magic Lamp", Hira public School. Intimate Annual 2011-12.**

27. **Special lecture on "Personality Development and Leadership Qualities". NSS Camp. CUCEK on 1st February 2012.**

28. **Presentation "Laser Speckle Interferometry: A powerful On Line Optoelectronic NDE Tool" NWOOC 5-6, January. 2011.**

29. **Invited speaker on "Laser Speckle Interferometry and Optical Image processing for NDT Applications", at VIT University, Madras, on 13th March 2010.**

30. **Talk on "Towards Better Teaching", Orientation for Contract Teachers at CUCEK on 11th November 2009.**

31. **Presentation on "Measurement and analysis of surface roughness properties of aerospace components using speckle photography", I-CAT 2009, 28-29. May 2009.**

32. **Seminar on "Speckle Non Destructive Testing" at International School of Photonics, Cochin University of Science and Technology on 19th February 2009.**

33. **Invited speaker : "Optical Techniques for NDE" Spectrum 2007, organized by Sree Narayana College Chempazhanthy, Thiruvananthapuramon 26th October 2007**

34. **Invited Speaker: "Laser Speckle Techniques for NDE", Technical Session II , at Mar Athanasius College, Kothamangalam, as part of State Level Seminar on Science and Technology of Non-Destructive Evaluation on 24th November 2006.**

CONFERENCE/SYMPOSIUM/SEMINAR: ORGANISED/CHAIRED/ATTENDED

1. **International Webinar cum National Photonic Symposium 2022 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and SPIE, OSA from 27th February to 1st March 2022. (Organizing Committee Member and Chair)-**

2. **IEEE Fourth International Conference of Microelectronics, Signals and Systems (ICMSS 21) held on 18/11/21at organized by the Department of ECE, TKM College of Engineering, Kollam (Session Chair).**

3. **ROWS Raman Optronics webinar Series, Virtual International Conference, Session "Signal Processing" 4th December 2021, organized by Department of Optoelectronics, University of Kerala (Session Chair)**

4. **International Webinar cum National Photonic Symposium 2021 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and SPIE, OSA from 27th February to 1st March 2021. (Organizing Committee Member and Chair)-**

5. **ROWS Raman Optronics webinar Series, Virtual International Conference, Session ' Lasers and Non linear Optics" 28th November 2020, organized by Department of Optoelectronics, University of Kerala (Session Chair).**

6. **National Photonic Symposium 2020 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and SPIE, OSA from 27th to 29th February 2020. (Organising Committee Member and Chair)-**

7. **National Photonic Symposium 2019 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and SPIE, OSA from 27th February to 1st March 2019 (Chief Organiser and Chief Editor NPS 2019 Proceedings).**

8. **International Day (11th February) for Women and Girls' in Science, on 14th February 2019 at International School of Photonics (Chief Patron)-**

9. **OSA Travel Lecture on 7th January 2019, sponsored by OSA at International School of Photonics. (Chief Patron)-**

10. **International Day of Light, on 16th May 2018, sponsored by OSA and SPIE (Chief Organiser)-**

11. **National Photonic Symposium 2018 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and SPIE, OSA from 27th February to 1st March 2018 (Chief Organiser and Chief Editor NPS 2018 Proceedings).**

12. **Curtain Raiser Programme, CUSAT, Kerala Science Congress, January 2018, at International School of Photonics on 10th January 2018 (Co-ordinator)-**

13. **International OSA network of Students- IONS Kochi, sponsored by Optical Society of America,hosted by International School of Photonics, Cochin University of Science and Technology during 11th to 14th September 2017 (Chief Patron)-**

14. **National Photonic Symposium 2017 at International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission and KSCSTE from 27th February to 1st March 2017 (Chief Organiser and Chief Editor NPS 2017 Proceedings)-**

15. **"Sign In – Science to ignite Inspirations", Five days workshop for KSCSTE prathibha Scholars, organized at International School of Photonics, CUSAT from 14th to 18th February 2017 (Chief Co-ordinator)-**

16. **29th Kerala Science Congress, organized by Kerala State Council for Science Technology and Environment, Government of Kerala, at Marthoma College Thiruvalla during January 28-30 2017.**

17. **26th National Seminar and International Exhibition on Non-Destructive Evaluation 15-17 December 2016 organized by Indian Society for Non-Destructive Evaluation at Thiruvananthapuram (Local Organizing Committee and Executive Committee member).**

18. **National Photonic Symposium and Workshop-2016 organized by International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission on 27th February 2016-**

19. **3rd National Conference on recent advances in Engineering and Technology nCORTech'16 organized by LBS College of Engineering at Kasargode during 10-11 February 2016 (Chief Patron)-**

20. **Annual Photonic Workshop-2015 organized by International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission on 26th February 2015-**

21. **First International Conference on Computational Systems and Communications ICCSC14, organized by LBS Institute of Technology for Women during 17-18 December 2014. (Patron and Member, Advisory Committee).**

22. **Three Day international Symposium on Assistive Technology for rehabilitation and Disability Management, during 2-4 December 2014, organized by Centre for Disability Studies, LBS Centre for Science and Technology, Trivandrum (General Chair and organizing Committee and Editorial Board Member).**

23. **Eleventh International Conference on Condition Monitoring and Machinery Failure Prevention Technologies CM2014/MFPT 2014 organized by The British Institute of Non-Destructive Testing at Marriott Victoria & Albert Hotel, Manchester, U.K. during June10-12, 2014.**

24. Annual Photonic Workshop-2014 organized by International School of Photonics, Cochin University of Science and Technology sponsored by University Grants Commission on 27th February 2014-

25. National conference on Advances in Computational Intelligence and Communication Technologies 2013 organised by Department of ECE and CSE, LBS Institute of Technology for Women on 27th Jun e 2013-

26. International Meet on Transnational Education conducted by the Kerala State Higher Education Council during 3-5 January 2014, at Thiruvananthapuram.

27. Two days National seminar on Multidisciplinary approach to Childhood Disability management, during 3-4 December 2013, organized by Centre for Disability Studies, LBS Centre for Science and Technology, Trivandrum (Organizing Committee and Editorial Board Member).

28. Two days National seminar on Multidisciplinary approach to Disability management, during 3-4 December 2012, organized by Centre for Disability Studies, LBS Centre for Science and Technology, Trivandrum (Organizing Committee and Editorial Board Member).

29. Training programme on Blade server Implementation & Configuration, during 26-27 November 2012, organized by Software Engineering wing, LBS Centre for Science and Technology, Trivandrum. (Co-Ordinator).

30. Syndicate Members' Meet 2012 organized by Kerala State Higher Education Council on 16th October 2012

31. Emerging Kerala 2012, September 13th at Le Meridian Kochi-

32. Professor Pishorody Memorial Science Lecture, organized by Centre for Science Communication, CUSAT on 30th March 2012-

33. II National Conference on Indian Language Computing (NCILC-2012) organized by the department of Computer applications, CUSAT, inaugural ceremony, on 18th February 2012-

34. All Kerala NSS Programme Officers Meet 2010, organized at Thiruvananthapuram on 31st July 2010-

35. Nondestructive Evaluation of Aerospace Material and Structures II, ASNT, St Luis, MO, USA, 24-25May 2010.

36. Annual Photonic Workshop - 2010 organized by International School of Photonics, Cochin University of Science and Technology (CUSAT) in collaboration with Photonics Society of India sponsored by University Grants Commission & ISP-MHO Project during February 27-28, 2010-

37. 97th Indian Science Congress 2010 organised jointly by ISCA, ISRO and University of Kerala during 3-7 January 2010.

38. National seminar on Recent Advances in Digital Techniques for Non-Destructive Evaluation organised by Indian society for Non-Destructive Testing Thiruvananthapuram Chapter and Digital Radiography working Group India on 21st November 2009 at Thiruvananthapuram.

39. International conference on Anti-counterfeiting technologies organised by Centre for Development of imaging technologies, govt. of Kerala held at Trivandrum on 28th and 29th May 2009.

40. National seminar on Photonic materials, NSPM 2009, organized by the department of Optoelectronics, University of Kerala during 26-28, February 2009.

41. National workshop on Dspace for Building Institutional Repositories and Digital Libraries organized by Mahatma Gandhi University at Federal Institute of Science and Technology Angamali on 21st October 2008-

42. UGC- AICTE Review Committee meeting held on 13th June 2008, hosted by the University of Kerala, Thiruvananthapuram.

43. National Conference on Recent Trends in Optoelectronics and Laser Technology organized by the Department of Optoelectronics, University of Kerala during 9-11 April 2007.

44. National Seminar NDE 2006 conducted by Indian Society for Non Destructive Testing, Hyderabad Chapter during 7-9 December 2006.

45. State Level Seminar on Science and Technology of Non Destructive Evaluation organised by the department of Physics, Mar Athanasius College, Kothamangalam on 24th November 2006.

46. Seminar "INSIGHT", organized by School of Technology and Applied Sciences (STAS), Mahatma Gandhi University, Pathanamthitta Regional Centre on 28th February, 2006-

47. International Education Meet conducted by Government of Kerala at Kochi during February 4- 9, 2006-

48. Seminar on Optoelectronics organized by the Optoelectronics Students Association of Kerala University (OSAK) at the Department of Optoelectronics, University of Kerala at Kariavattom on 15th December 2004.

49. National Seminar NDE '03 conducted by Indian Society for Non Destructive Testing , Trivandrum Chapter at Techno park during 7-12 December 2003-

50. DAE- BRNS National Laser Symposium 2002 Sponsored by Department of Atomic Energy, Board of Research in Nuclear Sciences conducted by Centre for Atomic Energy (CAT) Indore at Sree Chitra Tirunal Institute of Medical Sciences and Technology, Thiruvananthapuram during November 14-16, 2002.

51. Fourteenth (XIV) Kerala Science Congress organized by State Committee on Science Technology and Environment (STEC), Government of Kerala at Cochin University of Science and Technology (CUSAT) Campus, Kochi during 29 - 31 January, 2002.

52. **DAE- BRNS National Laser Symposium 2001 Sponsored by Department of Atomic Energy, Board of Research in Nuclear Sciences conducted at Centre for Atomic Energy (CAT) Indore during 19 - 21 December, 2001.**

53. **National seminar on The Role of NDE in Residual Life Assessment and Life Extension organized by Indian Society for Non Destructive Testing (ISNT) at Mumbai during 7-9, December 2001.**

54. **National Seminar on Spectroscopy, Optoelectronics and Non destructive Evaluation (SPENDE) organised by the Department of Optoelectronics, University of Kerala at Kariavattom Campus during 25-26 May 2001.**

55. **National Seminar NDE 98 conducted by Indian Society for Non Destructive Testing, Trivandrum Chapter at Techno park during 7-12 December1998.**

56. **National Seminar NDE 97 on Nondestructive Evaluation for Life Extension organized by Indian Society for Non Destructive Testing at Hyderabad during 11-13 December 1997.**

57. **Ninth Kerala Science Congress organised by state Committee on Science Technology and Environment (STEC), Government of Kerala at Trivandrum during 27-29 January1997.**

58. **XXIV Annual Convention of Indian Society for Technical Education (ISTE) at Regional Engineering College, Calicut during 17-19 December 1994-**

PESRSONAL PROFILE

Address (Residential)	**'Sahal', T.C. 43 / 419 - 2** **Thoppil Gardens -36, Kamaleswaram,** **Manacaud. P.O., Trivandrum-9** **Ph : 0471-2455786, 09447419505 (Mob)** **Email : mujeebpoovar@gmail.com**
Nationality	**Indian**
Marital Status	**Married**
Wife	**Dr. H Sahira. M.B.B.S., M.D.** **Associate Professor** **Department of Microbiology** **Governmnet Medical College, Kollam**

DECLARATION

I do here by declare that the above information is true to the best of my knowledge and belief.

Cochin-22
10.10.2022 **A MUJEEB**

REFERENCES

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Founder, Head, Dept of Optoelectronics
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Dr V P Mahadevan Pillai
Vice Chancellor
University of Kerala
Thiruvananthapuram
Phone: 0471 2446909

Selected General Presentations / Address / welcome/Public Speech.

DR VR Ravindran Memorial Lecture and Prize distribution on 7th December 2020 with Prof V P Mahadevan Pillai, Vice Chancellor, Kerala University.

Academic Induction Programme 2019 -2020 Batch at Cochin University of Science and Technology from 1st July 2019 to 3rd July 2019 with Vice Chancellor Dr Madhusoodhanan.

National Photonic Symposium 2019 at International School of Photonics, on 27th February and 1st March 2017 with Hon'ble Vice-chancellor Dr J Letha.

National Photonic Symposium 2018 at International School of Photonics, on 27th February and 1st March 2017 with Hon'ble Vice-chancellor Dr J Letha.

Kerala Congress Curtain Raiser Program 2018 at International School of Photonics on January 2018.

National Photonic Symposium 2017 at International School of Photonics, on 27th February and 1st March 2017 with Hon'ble Vice-chancellor Dr J Letha and Member Syndicate Prof. M.K Jayaraj

"Sign In – Science to ignite Inspirations", Five days workshop for KSCSTE prathibha Scholars, organized at International School of Photonics, CUSAT on 14th and 18th February 2017 with Hon'ble Vicechancellor, CUSAT Dr J letha, Pro Vice Chancellor Dr Poulose Jacob.

Inauguration of LBS Integrated Institute of Science and Tehnology 27th February 2016 with Honble Chief Minister Sri Ommen Chandi, Hon'ble Education Minister Sri P.K. AbduRabb at Tirurangadi

ADHD World Awareness Day on 13th October 2015 organised by CeD Sinaugurated by Honble Education Minister P.K Abdurabb

LBS Centre Harippad Centre Inauguration on 3rd June 2015 with Hon'ble Home Minister Sri Ramesh Chennithala.

Two day training Programme for D Skill Co-ordinators on 12th and 13th March 2015 at Centre for Excellence in Disability Studies.

Inauguration of Yagna Dhruva 2015at LBS ITW on 6th March 2015.

Inauguration of CUSAT Seminar Complex on 16th September 2014 with Honble Chief Minister Sri Ommen Chandi, Hon'ble PWD Minister Sri V.K. Ibrahim Kunju at CUSAT , Kochi.

Launch of technical association and literary club at LBSITW on 08th August 2014

Lal Bahadur Sasthrijis, Bust unveiling 18th July 2014 with Hon'ble Chief Minister Sri Ommen Chandi.

CAPE College of Engineering Muttathara foundation stone laying ceremony on 4th December 2013with Honble Chief Minister, Hon'ble Education Minister , Honble Health Minister etc,

Inaugurationof Extension Block of Cadets hostel KMSME, and Canteen (School of Engineering) on 15th November 2013 withHon'ble Fisheries Minister Sri K Babu.

ASAP inaugural programme at Iqbal College Peringammala on 17th June 2013.

CUCEK canteen and Civil Engg block Inauguration 16th March 2013 with Kodikkunnil Suresh MP.

Civil Engineering Association Annual Day and releasing of Mazazine LBSITW, 27th February 2013.

Inaugural function of MTech degree programmes and direct cash Transfer scheme of PG Scholarship at LBS ITW on 9th January 2013with EM and Hon'ble Min for State for Human Resources Development.

OPTAAK VRR Memorial Lecture on 16th November 2012 at Department of Optoelectronics University of Kerala.

Inauguration of MTech programe (Mechanical), foundation stone laying of Mechanical P G Block on 12th November 2012 with Hon'ble Minister for Education Sri. P.K. AbdulRabb at LBS College of Engineering Kasargode.

Higher Education Survey Workshop at University of Kerala on 19th October 2012.

Photonics Directorship : Reminiscence

Prof. (Dr) A Mujeeb
International School of Photonics,
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Abstract: **This is a brief report of the activities done during my tenure as Director in International School of Photonics during the past 3 years. I am presenting this report with much satisfaction after completing the three year term (from 25th July 2016 AN to 25th July 2019 FN) of the Directorship.**

Key words: Team ISP, Photonics, Director, Mujeeb

1. INTRODUCTION

I took charge as Director in this esteemed institute, the International School of Photonics (ISP), on 25th July 2016 AN for a period of three years as per the provisions in the CUSAT 1st statute, 1991 in respect of the appointment and other service conditions of the teachers in the university. The first assignment was to equip the school to face the NAAC visit with confidence to appear before the NAAC Committee. As a member of the syndicate during the period I could expedite the activities through the statutory officers. All the files were procured and arranged in order, boards and pointers were placed, records were maintained, proper work related to the requirement, were completed before the inspection of NAAC 2016. As a result we have received the rewarding remarks of NAAC that Photonics is one among the only 3 disciplines in the university that have excelled in the national level by its best performance in the school from among nearly 40 schools / departments /centres in CUSAT. I am happy to state that the entire university was rejuvenated and delighted when the university was recognized with the Chancellor's Award received by the then hon'ble Vice Chancellor Prof. (Dr) J Letha in 2017.

The funding from different agencies and from the university was considerably enhanced during the period and more facilities/equipments were procured. The two compendiums, three photonics news and NPS Proceedings each were published during the period comprising the curricular, co-curricular and extracurricular activities during the period. New thrust area of research has been established in the field of laser speckle metrology with the award of a Ph.D degree in that area during the period. I had been assigned to co-ordinate four national level CSIR Eligibility test for Lectureship and Junior Research Fellowship by Hon'ble Vice Chancellor Prof.(Dr.) J Letha and the same has been successfully coordinated with much satisfaction and involvement. The former acting Vice Chancellor Prof. (Dr) R Sasidharan has in fact given a letter of appreciation for this. The responsibility to conduct the first ever Induction Programme for the newly admitted PG students in the university was assigned to me by the present Vice Chancellor Prof. (Dr) K.N. Madusoodhanan that I had completed with an excellent feedback from university community, entire parents and students.

The details of the activities done since 25th July 2016, is presented mainly under different sections: Establishment, Research & Academics, Facilities, Developmental activities and Other Assignments.

2. ESTABLISHMENT

Department Council meetings were convened regularly to discuss and resolve matters. During the period, the probation in respect of Dr. M. Kailasnath (Professor), Dr Pramod Gopinath (Professor), Dr. Saji K.J. (Assistant Professor), Dr. Manu Vaishakh (Assistant Professor), Mr. Muhammad Rishad K P (Assistant Professor), and Dr. Priya Rose T (Assistant Professor) were successfully declared. Permanent hands in the vacant posts of Assistant, Computer Assistant and Sweeper cum Cleaner were joined. Including three Assistant Professors on contract basis, all faculty positions were complete.

2.1 Faculty positions

Professors:	Dr A Mujeeb Dr. M Kailasnath, Dr. Pramod Gopinath, Dr. Sheenu Thomas
Assistant Professors:	Dr. Saji K.J., Dr. Manu Vaishakh, Sri. Muhammad Rishad K P, Dr. Priya Rose T
Assistant Professors (Contract):	Dr. Bini P Pathrose, Dr. Retheesh R, Dr. Manickam, Dr. Binoy Thomas, Dr. Anjitha Vishwanathn,
Inspire Faculty:	Dr. Praveen C.S.
Retired Professors:	Dr. P Radhakrishnan, Dr. VPN Nampoori, Dr. Girijavallabhan
Adjunct/Guest Faculty:	Dr.Sreenivasan Nair, Dr Amith Kumar Prasad, Dr Anantha Krishanan, Priyamvada, Dr Reethamma Thomas, Dr M Rajendran, Sri Varadarajan
PDF:	Dr. Mathew S, Dr. Mohammad Zaheer Ansari, Dr. Rahna P Ummer, Dr. Kamal P Mani, Dr Pradeep Chandran

2.2 Administrative staff

Section Officer	Siraj S.
Office Superintendent	Sajitha K A
Store Keeper	Beema Beegum A.M.
Assistant Section Officer	Shamla Beevi T.I.
Assistants	Shyni C.S., Soorya Gayathri, Vijaylexmi, Nitha V
Computer Assistant	Rema, Vijeesh, Bindhu, Sandhya
Instrument Technician	Rajasree P.S.
Technical Assistant	Beena Sajith, Jithin Santhosh, Shyam Krishnan, Sarath Kumar, George P Mathew, Nejiya, Cyriac Xaviour, Reshma, Deepthi, Mohd Abuthahir
Librarian	Vinitha, Sunitha, Simimol, Greeshma
Office Attendant	Nikhil, Ajas, Rasheeda, Akhila, Ibrahim
Sweeper Cum Cleaner	Biju P.K., Amina, Rughmani, Shyni Dileep, Ajitha.

Formal welcome and sent off functions were arranged for the staff members at the time of joining and relief. All the vacant posts were filled during the period either by permanent hands or on contract. Post doctoral Fellow and Inspire Faculty are joining first time in ISP. All the former Directors are having good acquaintance with the department.

3. RESEARCH & ACADEMICS

I am extremely happy to be successful in continuing the unique and most beneficial practice mentored by my predecessors to ensure open access to all research laboratories for all research scholars to utilise any facility for research purpose. during the entire term of my office. Good number of papers in reputed peer reviewed journals were published during the period [1-8]. Guidelines issued for regular semester evaluation of research scholars. Regular Department Research Committee meetings were convened to discuss and decide various issues.

3.1 New Research Scholars (20):

Cicily Rigi V J, Fathima R, Hajara P, Keerthana S H, Lakshmi B, Divya D Pai, Pradeep Kumar V, Praveen P, Soumya S, Safna Saif, Nishanth N, Adarsh K J, Shilpa S, Karthika Sankar, A.K. Sooraj Viswam, Titu Thomas, Jayaprasad K V, Anugop, Vijoy, Lakshmi.

3.2 Ph.Ds Awarded (08):

Bejoy Varghese (2017), Pradeep Chandran C (2017), Jaison Peter (2017), Linslal C.L. (2017), Bini P Pathrose (2018), Bobby Mathews C (2018), Retheesh R (2018), Vivek (2019)

3.3 JRF TO SRF (08)

Alina C Kuriakose (MANF), Adrine Antony Correya (UGC SRF), Sony U (UGC SRF), Priyamvada V.C. (U SRF), Anadam Sarkar (Uty SRF), Vijesh K.R. (NFHST SRF), Rajsha M M (UGC SRF), Fathima.R (CSIR SRF).

3.4 ACADEMIC ACTIVITIES

The number of seats for M.Tech. enhanced from 10 to 18 during the period. All main conditions stipulated by AICTE are satisfied except fire and safety precautions. The new regulations and syllabi for M.Sc. were revised under the Board of studies chairmanship of Prof. P Radhakrishanan for 2018 admissions. Academic auditing was completed under the co ordination of Dr Sheenu Thomas by external experts. A formal sent off meeting has been started arranging for the outgoing M,Sc. students with a photograph session in the last working day of their ninth semester before going to the project. Proper regulations for the Group tutors to mentor the students were framed. MSc. students were permitted to go for industrial visit during the year 2017 and 2019 by observing the university guidelines.

3.4.1 National Photonics Symposium 2017, 2018, 2019

The Annual Photonics Workshop (APW) conducted from the very inception of this institute has been changed to National Photonics Symposium (NPS) in tune with National Laser Symposium (NLS) as we could not conduct workshops on lab experiments during the conduct of the previous APWs. In addition to the Photonics News, a separate proceedings, on the papers presented in NPS, has been published with ISBN from Public Relations and Publication Department. Several experts on diversified areas of Photonics research field shared their expertise during the three NPS. Dr Saji K J, Dr Manu Vaishakh and Mr Muhammad Rishad co-ordinated the three NPS under my supervision in the years 2017, 2018 and 2019 respectively. The then Vice Chancellors Prof (Dr.) J.letha inaugurated the NPS 2017& 2018 and Prof R Sasidharan inaugurated NPS 2019.

3.4.2 Optics fair 2017

ETCHNEW, the optics fair, under the aegis of OSA/SPIE was held to promote and encourage students' interest in Optics and Photonics. It was conducted on 16th and 17th January 2017with participation around 900 students from schools in and around Ernakulam District.

3.4.3 Sastrayan 2016, 2017

Sastrayan was the initiative by CUSAT to connect the university with the society better by inviting the public to feel and experience the research and academic achievements on its main campus. ISP showcased its Research and Developments to the Public through this programme in 2017 and 2018.

3.4.4 OSA Lecture Series 2016

Four sets of lectures scheduled in four weekends with the first set of lectures given by Dr. Andal Narayan, LAMP Group, Raman Institute, Bangalore on 1st and 2nd October 2016. Prof. K Thyagarajan (Dept. of Physics, IIT Delhi) delivered a lecture on 15th October 2016.

3.4.5 SIGN IN (Science to Ignite Inspirations) 2017

A five day residential science camp for KSCSTE Sastra Prathibha Scholars was conducted during 14th to 18th February 2017. This program is named as sign in (Science to ignite inspiration). It inculcated lecturer demonstration by well known scientists, academicians followed by lab visits, science competition. Dr. Priya Rose and Prof. V P N Nampoori were the Assistant and Academic Coordinators of the program under my co ordinatorship.

3.4.6 Inculcate 2017

A Science Programme was organized in assistance with Kerala State Council for Science & Technology Museum and Priyadarsini Planatorium from 20th to 23rd May 2017, to provide opportunities to selected school students to meet eminent scientists, to attend their lectures and to take part in Laboratory activities. Dr. Priya Rose T was the co coordinator of this program.

3.4.7 International OSA network of Student Conferences IONs 2017

This is an event sponsored by OSA (Optical Society of America) during 11 – 14 September 2017. This was co-hosted by IISc, Bangalore. ISP was selected to host the conference owing to its large OSA student Chapter, Strength and significant chapter activities. It is the first and the only institution in Kerala to receive this honour. The programme inaugural and Valedictory addresses were done by Prof. (Dr) J. Letha, Vice Chancellor and Prof. (Dr) Sankaran, Pro Vice Chancellor.

3.4.8 Kerala Science Congress Curtain Raiser Programme 2018

The curtain raiser programme of the 30th Kerala Science Congress, was jointly organized by the Kerala State Council for Science, Technology and Environment (KSCSTE) and ISP on 10th January 2018 under my direct co ordinatorship. Dr Anil Kumar, Principal Scientist KSCSTE, Prof Sunil K Narayanan Kutty, Controller of Examinations blessed the function with their presence.

3.4.9 International Day of Light 2018, 2019

We have celebrated the International Day of Light on May 16th 2018 and 2019 as declared by UNESCO. The highlight of the day's celebrations was the offering of a helping hand to a deserving outside student with the aim of "spreading light into longing eyes". The endeavor was taken up by the members of the school by collecting an amount in order to facilitate the eye surgery of a student at the Little Flower Hospital,Angamali. The program was coordinated by Dr. Saji K J in 2018 and Prof. Sheenu Thomas in 2019 under my mentorship. Prof Sankaran, Pro Vice Chancellor and Prof K.N Madhusoodhanan, Vice Chancellor inaugurated the observance of the day in 2018 and 2019 respectively.

3.4.10. Optics to School 2018

Optics kit, comprising laboratory equipments is a venture launched by the student chapter as part of optics school programme, funded by the Optical Society. In the context of the recent flood in Kerala, many schools were affected and suffered a huge loss with regard to their lab equipments and infrastructure. Considering this, we have decided to help them to rebuild their schools as soon as possible. For this, ISP conducted a survey on the extent of damages the flood had caused in science laboratories across the state. After short listing a few schools that had previously collaborated with the department through participation in the annual optics fair, two government schools namely GVHSS Kadamakudy and GHSS Kongorpilly that suffered the maximum damage were identified. Equipments for the Physics and Chemistry laboratories which included apparatus like sonometer, dynamo ACDC combined model etc., worth Rs.50,000/- were handed over to the respective authorities on 29 November 2018 by the Hon'ble Vice Chancellor of CUSAT Prof. (Dr.) R. Sasidharan in a program conducted in our department.

3.4.11 International Day of Women and Girls on Science, 2019

On 11th February 2019 we have celebrated the International day of women and girls in science and recognized Dr. Jayalekshmi former Professor and Head, Department of Physics of her meritorious achievement in the field of Science. Mrs. Biya, Administrative Officer from University of Gothenburg, Sweden attended the programme.

3.4.12 Professors under erudite Scheme 2019

The staff and students took part in the interactive sessions with two eminent professors, Prof. Suresh C Pillai from Centre for Precision Engineering, Institute of Technology, Sligo, Ireland and Prof. Ayodhya N Tiwari, a senior Scientist (Leader of the Photovaltaic Materials and Devices Group) in Thin Film Physics Group, Institute of Quantum Electronics, Swiss Federal Institute of Technology, Switzerland, under the Erudite Scholar-in-Residence Program. Prof. Suresh C Pillai gave the talk on 8th January 2019 and Prof. Tiwari addressed the students on 4th January 2019.

3.4.13 OSA Travelling Lecture Programme 2019

Dr. Chales Middleton, Principal Investigator of Photonics at Harris Corporation, USA visited ISP on 10th January 2019 as part of the OSA travelling lecture programme and gave a talk on "Integrated Photonics and career

development". This programme was arranged to facilitate the interactions of our M.Sc/M.Tech/Ph.D. students with Dr. Charles Middleton. Apart from sharing his rich experience in the area of Integrated Photonics, he could also give a good exposure to career possibilities in this field.

3.4.14 Lecture Series under Erasmus plus programme 2019

The students of ISP were fortunate to attend to a series of lectures by Prof. Vitali Zhaunderchyk, a senior lecturer from the department of Physics, University of Gothenburg, Sweden as part of the MOU signed with CUSAT under the Erasmus Plus programme. Lectures covering topics such as Laser fundamentals, Molecular Spectroscopy with Table-Top lasers, Sytnchrotrons and free electron lasers, Infrared Spectroscopy etc were given by Prof. Vitali during 8th and 9th of January, 2019. The lecture sessions were followed by interactive sessions held separately for M.Sc., M.Tech. and research students which were very helpful in understanding the research facilities as well as career possibilities available at Gothenberg University. It is envisaged that the discussions and interactions with Prof. Vitali Zhaunerchyk, will open up future collaborative programme between University of Gothenburg and CUSAT.

3.4.15 SPIE Travelling Lecture Program

Prof. Gaurav Sharma, a distinguished professor from Dept. of Electrical Engineering, University of Rochester, Visited ISP on 21st February 2019 and spoke on Imaging arithmetic, in which various modelling techniques were discussed.

3.4.16 Thursday / Special Seminars 2017, 2018, 2019

Thursday/special seminars were continued in every week by ISP members and invited guests, with sponsorship of SPIE and OSA [1-8].

4. NEW FACILITIES:

4.1 Andor SR 500i Spectrometer assembly (under state plan 2016-17)

The USB 2.0-based Andor - iDus spectrometer is a compact, platform suitable for demanding spectroscopy applications such as low-light UV/NIR Photo luminance or Raman spectroscopy, as well as day-to-day routine laboratory operation and integration into industry-grade systems. This facility was purchased for Rs 2581533/ under intensive research scheme funded by the university during 2016-17.

4.2 Digital phosphor Oscilloscope (under RUSA 2017-18)

The Tektronix DPO70604C with 4 analog channels has a high signal-to-noise ratio and low internal noise floor. It is used to find the smallest anomalies affecting the DUT's performance. Bandwidth enhancement eliminates imperfections in frequency response all the way to the probe tip. User-selectable filters for each channel provide magnitude and phase correction for more accurate representation of extremely fast signals. The facility was purchased under RUSA for Rs 3114627/ during 2017-18.

4.3 R F Sputtering Unit (under DST PURSE 2017-18)

A highly sophisticated computer controlled radio frequency magnetron sputtering equipment is now available in the school. On an atomic level, sputtering is the process whereby atoms are ejected from a target and to be deposited on a substrate - such as glass, quartz, silicon wafer as a result of the bombardment of the target by high energy particles. RF sputtering can sustain plasma throughout the chamber with a lower pressure and overcomes the problems like disappearing anode, arcing, race track erosion etc. Various processing parameters like RF power, substrate to target distance, substrate temperature, ambient gas atmosphere, target substrate orientation, deposition rate and time etc., can be varied to get high quality thin films. The unit is funded by DST PURSE during 2017-18. The total cost was Rs 7494911/.

4.4 Minor equipments under Research intensive Scheme 2017-18

Laser, Goggles, filters, optical items etc., worth Rs 985073/ were purchased for research labs under funding scheme for Research intensive departments.

4.5. Intensified Charge Coupled Device Camera (under DST FIST and University 2018-19)

iStar Intensified Charge Coupled Device (ICCD) Camera from ANDOR now available in our laboratory has CCD sensor with total matrix size of 1024x1024 pixels and effective pixel size of 13 μm x 13 μm. The photocathode used in the image intensifier is WE-AGT type (Gen II) detecting 180-850 nm wavelength regions. They hold a fully integrated software-controlled Digital Delay Generator (DDG) with gate delay as well as width adjustable from 0 ns to 10 s in 1ps steps. The minimum optical gating of intensifier is <2 ns. This highlighting features of Intensified CCD makes it capable of capturing images of transient phenomena with very fast gate times (ultrafast Imaging) and achieves nano-second time-resolved spectroscopy. For imaging purpose the ICCD is coupled with a UV-VIS lens for wide aperture slit. Accurate nanosecond-scale gating of image intensifier-based detectors can be used to sample plasma dynamics. ICCD has been widely used also for automated 2D elemental mapping by LIBS, laser induced florescence spectroscopy and Thomson scattering. The ICCD camera was purchased by utilising fund from DST FIST and the university during 2018-19. The total cost is Rs 3500001/

4.6 Compact Pulsed Nd-YAG laser

The newly installed pulsed Nd-YAG laser system, Q-smart by Quantel, funded by DST SERB is a very compact and easy to use laser with energy of 450 mJ for the Principal wavelength of 1064 nm. Pulses of width 6 ns and a repetition rate of 10 Hz are available from this system. Separate modules, which can attach to the main

system, are available for second and third harmonic generation. Being very compact and easy to operate, Q-smart will find applications in many of the research activities of the students including ablation, lasing and Z scan experiments. This facility was purchased for a project under the principal investigatorship of Dr. M. Kailasnath, Professor.

4.7. Hall Effect Measurement System

Hall effect is an important tool for the electrical characterization of semiconductor materials. It provides a direct determination of resistivity, doping type, mobility and carrier density. The basic setup consists of a thin film material to be studied is placed in a magnetic field oriented right angles to the film. A current is made to flow through the sample and voltage difference is measured using Van der Pauw method. The measurement system was funded by DST SERB for the project under the principal investigator ship of Dr. Saji K J. Assistant Professor.

4.8 List of other FIST funded lab equipments for M.Sc. and M.Tech. courses procured during the period, 2018-19

Total cost was Rs 1997720/

Fabry-Perot Interferometer

Acousto-Optic Effect

Optical Fiber Characterization Apparatus

Software for Optical Fiber and planar waveguide simulation

Mach-Zehnder Interferometer

Pockel Effect Apparatus

Brewster Angle Apparatus

Geometrical Optics Experimental Setup

Laser source and Detectors

Optic Components

Opto Mechanical Components

Lab Jack

Translation Stages

Hall Effect Apparatus

Spectrophotometer

Faraday Effect Apparatus

Laser Optics Lab

Speckle Interferometry Setup

4.9 New Fume Hood 2018-19

In order to provide better safety measures for chemical preparations, a new fume hood was purchased and started its operation on 18th July 2019 in the newly constructed chemical lab in the up stair.

4.10 Chemical and Consumables

Considerable increase has been gained in the amount for the purchase of chemicals and consumables satisfying the needs of the researchers during the period. We have utilised Rs 225000/ during 2016-17, Rs 235550/ during 2017-18 and Rs 299960/ during 2018-19. Four Lakh rupees was sanctioned under theses heads for 2019-20.

4.11 Repair and Maintenances

The amount sanctioned and utilised under this head was increased each financial year from 1,5 lakh to 5 lakh for the year 2016-17 to 2019-20. Apart from regular maintenance, the Optical Spectrum Analyser was repaired by sending the item to the company in Bangalore, after receiving a fund of Rs One lakh diverted from the fund for compound wall construction. The Nd Yad laser is fitted with new board costs nearly 4.5 Lakh rupees.

4.12 Computers and Equipments

During 2016-17 the amount sanctioned under this head was 5 lakh rupees. It was increased to 10 and 10.8 lakhs during 2017-18 and 2018-19. The amount sanctioned for equipments/ computers for the current year is 20 lakhs. Tenders were floated to purchase ACs and other equipments this year.

4.13 Annual Maintenance Contract.

The amount sanctioned for AMC is now Rs 150000 compared to Rs 30000/ during 2016-17 after successive increase during the past three years.

4.14 New Proposals

The alternate proposal of 3D ESPI facility given for DST PURSE along with RF sputtering is resubmitted for consideration under RUSA 11. Our department is completing its 25 years of its existence next year and we need to give proposals for developmental and other activities to both the government and the university in connection with the silver jubilee celebrations.

5. LIBRARY

Books worth nearly Rs 368298/ were purchased during the period. Extensive stock verification was completed and nearly hundred books were found missing during the last several years. The fact was reported to the syndicate and the same was written off. New Racks were purchased for stacking the books.

6. DEVOLOPEMENT ACTIVITIES

Apart from the work done for NAAC visit in 2016, such as painting renovations etc, a common sitting place under MSc students under stair case is set apart. The Anti room of the Director is renovated with tiles, false sealing and lighting. A separate room is identified for PDF in the up stair by splitting a staff room. A room with air circulation is set apart for the office of the Store as the existing room is air tight and adjacent to the noisy experimental systems.

6.1 Renovated Director's chamber

The director's chamber was renovated with most modern ambience with new cupboards, table and chairs in 2017. Two ACs (3.5 tone) were fitted for air conditioning.

6. 2 Renovated Office

The office was renovated in 2018 with separate cabins and glass separation for good ambience and better satisfaction of the employees.

6.3. New Furniture

Furniture worth 8.25 Lakh rupees were purchased during 2017-18 period for director's chamber, office and for faculty members. This year the university has sanctioned purchase of furniture only for our school other than hostels so that all the new faculty rooms are ready to use with modern furniture and tables worth 4 lakh rupees.

6.4. UPS room

The old and unused car shed situated in location that cant be accessed was converted as UPS room. A 20 KVA UPS with 30 tubular batteries back up is now available for the laboratory. A portion of the car shed is also set apart for installation of generator when purchased.

6.5. PWD Toilet and RAMP

The school is now friendly for physically challenged candidates with the newly constructed ramp and PWD toilet.

6.6. CCTV Camera and Smart TV

The department is now safe and secure under CCTV surveillance. The smart TV sponsored by the old students is now used for presenting notices and other informations.

6.7. Construction of extension of academic block, a long cherished dream.

In the 616th syndicate meeting held on 12.11.2014, in which I was also a member, the syndicate considered special repairs and maintenance of the building of International School of Photonics at an estimated amount of Rs 56, 55,000/, for repairing the leak. But the syndicate resolved to explore the possibility of building one more floor. When I joined in ISP as a full time faculty meber in 2016, a letter was sent to the university stating that ISP is facing shortage of built up area. In the 632th meeting of syndicate, it was resolved to sanction the proposal for the construction of vertical extension to the ISP building having an area of 576 m^2. Subsequently, M/s, C.P.W.D was entrusted for the construction work for an outlay of Rs 25277000/ and Mr. Sony George was awarded the work by CPWD, Prof. P. Radhakrishnan former Director blessed the starting of the work on 23rd November 2017. Unfortunately the construction work was stopped and a delay occurred in the work due to structural instability of the building. Several meetings were conducted with C.P.W.D officials including Mrs Geetha, the then AE to discuss about the stability issue and it was suggested that the work can be continued only after strengthening of pillars. The then Vice Chancellor Prof J Letha stood with the decision of continuing the work for concrete structure after identifying 17 pillars for reconstruction for strengthening. After shifting the books and lab equipments and by excluding one pillar near the femto second laser faci1ity, 16 Pillars/ column were jacketed in and around the library and laboratories. Overcoming all the objections and difficulties, the construction work again re started on 23.05.2018. Up stair concreting was finished on 10th January 2019. The building was opened for use by the Hon'ble Vice chancellor Prof. (Dr) Madhusoodhanan on 11th July 2019. I personally invited the team members for a recognition on the day in which a presentation was made to showcase the hardships gone through at several stages of the work before its completion and about the timely help by the then Vice Chancellor Prof J Letha. CPWD Officials Er Baskar (EE Civil), Er Gourav Mithal (EE Electrical), Er Sheik Muhammed (AE Civil), Er Jitendrakumar AE (Electrical), Er Maya (AE Civil), Shri Sony George (Contractor Civil), Shri Sabu (Contractor Electrical), Shri Varun Das (Site Engineer), Shri Shaji (Mason) were honoured. On the occasion, Mr Sabu, a worker who was ready at any time for any work for the department and Prof C P Girija Vallabhan, the Founder Director were also recognised. The vote of thanks for the programme was proposed by Mr. Siraj. S, the Section Officer.

False ceiling and lighting were arranged for the two faculty rooms in the old building as the staffs in the newly constructed building are enjoying the same ambience. Tenders are floated to purchase ACs for the newly constructed M.Tech. lab, Computer lab, Photonics lab I and II and for the lab in the ground floor.

The then Vice Chancellor Prof (Dr) J Letha visited the school on 24th July 2019 to see the completed building and expressed her happiness and satisfaction.

6.8 New Flooring for the Ground Floor Research Labs.

After the strengthening the columns and construction of the extension block, the floor of the existing fibre and Laser lab present in the left side of ground floor is renovated with vitrified tiles as the flooring was damaged for the last several years.

6.9. New Proposal

A proposal for constructing a car shed either in the front or backside is submitted to the university. Conversion of the old Chemical lab into new research lab is pending for want of shifting /setting up of chemical lab in the new building in upstair. False ceiling for the new computer lab, Chemical and Characterisation lab is pending.

7. EXTRA CURRICULAR ACTIVITIES

Apart from regular curricular and co curricular activities, extracurricular or celebrations such as Onam, X-mas, Ifthar, Teachers Day were observed as far as possible.

8. OTHER ASSIGNMENTS.

Apart from the regular administrative, research and teaching works, other responsibilities were also undertaken.

8.1 Co ordinator, CSIR UGC Examination.

Four CSIR examination, June 2017, December 2017, June 2018 & December 2018 were successfully conducted with much involvement and satisfaction. Altogether, 47554 candidates were appeared for the four examinations.

8.2 Convenor, induction Programme 2019

An induction programme for the newly admitted PG students in 2019 in CUSAT was conducted from 1st July to 3rd July 2019, for the first time. The programme was well appreciated by the authority, peers, students and parents.

9. CONCLUSION

I hope the school has a facelift in terms of academics, research and developmental activities during the period. I had built a strong and affectionate relation with former and present officials, my peers, colleagues and students in the school. The team spirit developed was the key for successful completion of the tasks. Hope, that I have mentored seventy five percent of the newly joined Assistant Professors.

ACKNOWLEDMENT

I offer thankful prayer to Almighty for the tremendous blessings showered during the entire period of the three fruitful years since 25th July 2016. I have received immense support from the Vice Chancellor to the Section Officer. The love and affection extended by the research scholars are worth mentioning. The love and respect shown by M.Sc. and M.Tech. students are recognised. I am happy with all my peers, faculty, technical and administrative colleagues listed here under section 2.1 and 2.2 for their team spirit, cooperation and service. Officials from the university, government, CPWD are also acknowledged. I am also acknowledging the immense patience shown by my beloved wife and other family members.

REFERENCES

[1] Photonics News, 2017.

[2] Photonics News, 2018.

[3] Photonics News, 2019.

[4] Compendium, 2013-18.

[5] Compendium, 2014-19.

[6] Proceedings, National Photonics Symposium, 2017.

[7] Proceedings, National Photonics Symposium, 2018.

[8] Proceedings, National Photonics Symposium, 2019.

Recognition during the period

Apart from member/ convenor/coordinator of several committees in the university such as DST PURSE, KIIFB, CSIR Exam, Induction Programme etc., nomination received to the Executive and Governing Council of Sophisticated Testing and Instrumentation Centre (STIC) and as Chairman of the Board of Studies of Photonics. Nominated to the assesses panel of National Assessment and Accreditation Council (NAAC). Became Senate member of CUSAT from the elected category of Academic Council members.