



Dr. V. Madhurima

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PERSONAL PROFILE

Email	Female	Date of Birth	December 2, 1970
Gender	She/Her	Nationality	Indian

ACADEMIC QUALIFICATIONS

1999: Ph.D. (Physics)

Department of Physics, Indian Institute of Technology -Madras, Chennai, Tamil Nadu.

Thesis Title: "Physico-chemical studies on hydrogen bonded binary mixtures of polar liquids"

M.Sc. (Physics)

Department of Physics, Indian Institute of Technology -Madras, Chennai, Tamil Nadu.

Others:

- Diploma in Indian Art, Nalanda Dance Research Center, Mumbai, 1997-99
- Certificate Course in Understanding music, Department of Indian Music, University of Madras, 2003-2004
- Diploma in Nrityashastra Nalanda Dance Research Center, Mumbai, 2012-2014.

POSITIONS HELD

Senior Lecturer at National Institute of Technology and Science - Chennai, (University of Madras and Anna University) October 5th 1998 to May 31st 2001

Senior Lecturer and Head of the Department of Physics - Saveetha Engineering College –Chennai. (Anna University) June 1st 2001 to July 14th 2003.

Post-doctoral work at the University of Hyderabad in the School of Physics – 20th December 2003 to 28th February 2005.

Research Associate Under the Universities with Potential for Excellence (UPE) Scheme of University of Hyderabad in the Project titled Low dimensional systems and Nano structured materials; 1st March 2005 to 31st July 2005.

Research Associate of the Council for Scientific and Industrial Research (CSIR) from 1st August 2005 to 27th January 2007.

Reader at Mizoram University, (Central) Aizawl, 05th February 2007 – 04th February 2010.

Associate Professor in Department of Physics, Mizoram University (Central) Aizawl from 05th February 2010 to 14th June 2012.

Associate Professor in Department of Physics, Central University of Tamil Nadu, Thiruvarur, from 18thJune 2012 – 12thDecember 2017.

Professor of Physics in Department of Physics, Central University of Tamil Nadu, Thiruvarur from 18thDecember 2017.

Associate of the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India, August 2019–July 2025.

ACADEMIC AWARDS/HONORS/FELLOWSHIPS/ACHIEVEMENTS

- ✓ Qualified: **CSIR-UGC NET** – for research and teaching.
- ✓ Qualified: Graduate Aptitude Test for Engineers (**GATE**) (**97.12 percentile**)
- ✓ Qualified: **Research Associate** of CSIR India.
- ✓ Recipient: **Post-Doctoral** RA of University of Hyderabad
- ✓ Tamil Nadu Government Education Ministry "**Jawaharlal Nehru Science Talent Scheme**" Award for 1988-89 for Physics in B.Sc.
- ✓ Secured **centum** in Allied Chemistry practical and secured second rank in Chemistry at B.Sc.
- ✓ **Merit scholarship** of IIT Madras during MSc.
- ✓ Citation in **appreciation of work** in Physics and gender in Physics by Chandraprabha Saikia Centre for Women's Studies, Tezpur University, 2022

PROFESSIONAL BODIES MEMBERSHIP

- ❖ **Life Member** – Indian Liquid Crystal Society – L92
- ❖ **Life Member** – Indian Physics Association – LM 13330
- ❖ **Life Member** – Indian Association of Physics Teachers -L1904
- ❖ **Life Member** –Physics Academy of North East (PANE) LM 0098
- ❖ **Life Member** – Indian Association of Women's Studies (IAWS) 24-L-0190.
- ❖ **Life Member** – Association of Bharatanatyam Artists of India (Abhai)
- ❖ **Member:** Division of Condensed Matter Physics, Association OF Asia-Pacific Physical Societies
- ❖ **Fellow**, Young Academy of India (J2Z2LY-CE000009)

Research Interest

Soft Condensed Matter/ Hydrogen bonds

1. Wetting studies, self-assembly of liquid drops, colloids
2. Ab initio and Molecular Dynamics simulations of Binary liquids, Metal complexes and molecular astronomy.

Sponsored Projects

1. Design, Synthesis and Physico-Chemical characterization studies of isotropic and anisotropic media for enabling high-k applications - Funded by Naval Research Board, India. PI: V Madhurima, Co-investigator: Prof N V S Rao, Department of Chemistry, Assam University. [Amount Total: Rs. 45,76,480 (Including overheads) (Rs. 25,32,000/- for MZU Rs 15,82,800 for AU)] [2008-2012]
2. Study of importance of hydrogen bonding in MEMS and bio devices through spectroscopy and computational methods - Funded by DST under SERC Fast Track Proposals for Young Scientists Scheme. [Rs. 21 Lakhs] [2009-2012]
3. Co-Investigator in "Synthesis and Characterization of n-type Organic Semiconductor for Potential Application in Electronics" Ref no: MRP-MAJOR-CHEM-2013-2056-CHEMISTRY. Main Investigator: Dr S Nagarajan, Department of Chemistry, CUTN. Rs.9,03,000/- . 2015-2018.
4. Structural and Bandgap studies of Organic Conjugated Systems – 2016-2019, Centre for Modelling, Simulations and Design (CMSD), University of Hyderabad. Resource sharing.

5. Health and Hygiene in Rural Woman. Coordinator V Madhurima, Co-Coordinator, Kavya Bakka Sponsored by National Academy of Sciences, Allahabad, October 2021- October 2022/ Amount Rs. 1,00,000/-
6. Dispelling Scientific Myths among School Children Coordinator V Madhurima, Co-Coordinator, Kavya Bakka Sponsored by National Academy of Sciences, Allahabad, October 2021- October 2022/ Amount Rs. 60,000/-

Ph.D. Guidance

1. **Jonathan Lalnunsiam**(MZU/Ph.D/327): Titled– Intermolecular interactions in and between molecules and substrates relevant to Bio-MEMS. 26th February, 2013 (Presently a faculty in the department of Physics, Government College of Sciences, Serchip, Mizoram).
2. **Debarun Dhar Purkayastha**(MZU/Ph.D/ 332): Title - Physico-chemical studies of liquids, soft matter and their interactions with surfaces. 26th February, 2013. (Presently an Assistant Professor of Physics, NIT, Dimapur, Nagaland).
3. **K Nilavarasi** (R131404) – Influence of constraints and hydrogen bonding on the self-assembly of liquid drops on Polydimethylsiloxane (PDMS) surfaces. (29th June 2019) – Presently Post-Doctoral Fellow at NIT, Trichy.
4. **Ashwini Harindran** (R. No. R141401) - Early Detection of Flocculation and Coagulation in Dairy Milk Colloids through Dielectric Spectroscopy and Droplet Drying Patterns. (6th May 2022)
5. **Abdul Kareem** (R190401)– current student
6. **Swathi Balan** (R190408)– current student
7. **Emanuel Daimari** (R 210402) - current student

Journal Publications

1. Sathyan N, V Santhanam, **V Madhurima**& J Sobhanadri (1995) *Conformational study on the binary mixture of acetone-methanol involving H-bonding*. J.Mol.Struc. (THEOCHEM) 342 721-726.
2. **Madhurima V**, V R K Murthy & J Sobhanadri (1998) Dielectric studies on Hydrogen bonded binary systems – Ketone Nitrile Ind.J.Pure&Appld.Phy., 36 144-148.
3. **Madhurima V**, J Sobhanadri& V R K Murthy (1998) Dielectric studies of Hydrogen bonded binary systems of Methanol with Ketones & Nitriles: a comparison with conformational analysis Ind.J.Pure&Appld.Phy., 36 85-90.
4. **Madhurima V**, N Sathyan, V R K Murthy & J Sobhanadri (1998) Dielectric and conformational studies of Hydrogen bonded acetone acetonitrile systems Spectrochimica Acta Part A [Molecular spectroscopy] 54 199.
5. Rajagopal K, T A Prasada Rao, **V Madhurima**, J Sobhanadri, V R K Murthy & B Viswanathan (1998) Electro-optical Kerr effect studies of polar-polar binary liquid mixtures J. Molecular Liquids 76 13-34.
6. Chitra M, R Dhamodharan, **V Madhurima**, B Subrahmaniam& V R K Murthy (1999) Dielectric studies of hydrogen bonded polar mixtures of ethyl benzoate with aromatic amines IEEE Proceedings of conference on dielectric liquids held at Nara –Japan July 20-25.
7. **Madhurima V**, J Sobhanadri& V R K Murthy (2004) ¹³C NMR and dielectric relaxation studies of methanol nitrile systems. Ind.J.Pure&Appld.Phy., 42 837-840.
8. Madhurima V (2005) Dielectric and conformational studies of methanol ketone system Ind.J. Pure &Appld. Phy 43 550-555.
9. **Madhurima V**, M.S.Moni, J.Sobhanadri&V.R.K.Murthy (2005) Dielectric and ¹³C NMR studies of hydrogen bonded binary systems of methanol ketones Journal of Molecular Liquids 122 38-42.
10. **Madhurima V**, K Sudheendran& K C James Raju (2006) Ab initio and dielectric studies of succinic acid and maleic acid in 1,4-dioxane. Molecular Simulations 32 331-337.
11. **Madhurima V**, B Viswanathan & V R K Murthy (2006) Effect of steric hindrance of ketones on the dielectric relaxation of methanol ketone systems. Physics and Chemistry of Liquids 44 563-569.

12. **Madhurima V**, K Sudheendran and K C James Raju (2007) Dielectric studies of some nano-confined liquid thin-films Journal of Molecular Liquids. –133 28-32.
13. **Madhurima V**, K Sudheendran and K C James Raju (2007) The possible formation of nano-clusters of succinic acid and maleic acid in tetrahydrofuran due to incomplete solvation Molecular Simulations 33 1119-1128.
14. **Madhurima V** and Zoramchhana (2008) Computational *Dielectric Studies of Weakly Bonded Binary Systems* IEEE Proceedings of the International Conference on Recent Advances in Microwave Theory and Applications 179-182.
15. **Madhurima V** (2009) Physics in a teacup Lunglohtui, A Magazine of Mizoram University. P 36-40
16. Lone B G, **V Madhurima** (2010) "Dielectric and Conformal studies of 1-propanol and 1-butanol in methanol" Journal of Molecular Modeling 17(4) 709- 719
17. **Madhurima V**, Debarun Dhar Purkayastha and N.V.S Rao, (2011) Wettability, FT-IR and dielectric studies of 1,4 dioxane and water system, Journal of colloid and interface science 357 (1) 229
18. **Madhurima V**, D DPurkayastha, K Sudheendran and K C James Raju (2011) A correlation between dielectric permittivity and wettability for low energy surface (Bismuth Zinc Niobate) on fused silica IEEE International Conference on Dielectric Liquids (ICDL) held at Trondheim, Norway, June 26-30, 2011. Print ISBN:978-1-4244-7352-6
19. U P Shaik, S Kshirsagar, M G Krishna, S P Tewari, D Dhar Purkayastha, **V Madhurima** (2012) Growth of superhydrophobic Zinc oxide nanowire thin films Materials Letters 75 51-63.
20. **V Madhurima**, J Lalnunsiamia (2012) Concentration dependent wetting by aniline-ethanol binary system Mediterranean Journal of Chemistry 2 (1), 365-373 <http://www.medjchem.com/index.php/medjchem/article/download/111/88>
21. J Lalnunsiamia, **V Madhurima** (2012) Wettability Studies of ITO Substrates Using Binary Mixture of Aniline Alcohols [Environmental Engineering Research 17 \(S1\), 49-52.](http://www.environmental-engineering-research.com/Environmental-Engineering-Research-17-(S1)-49-52)
22. J Lalnunsiamia, **V Madhurima** (2012) Surface tension study of concentration dependent cluster breaking in acetone-alcohol systems Science Vision 12 102-105. <https://www.eeer.org/journal/CitationForm.php?number=625> ;
23. D DPurkayastha and **V Madhurima** (2013) Interactions in water–THF binary mixture by contact angle, FTIR and dielectric studies J. Mol. Liq., 187, 54-57. <https://www.sciencedirect.com/science/article/abs/pii/S0167732213001955>
24. D DPurkayastha, R Pandeewari, **V Madhurima**, M Ghanashyam Krishna (2013) Metal buffer layer mediated wettability of nanostructured TiO₂ films Materials Letters 92 151–153. <https://www.sciencedirect.com/science/article/abs/pii/S0167577X12015029>
25. M G Krishna, **V Madhurima**, D DPurkayastha (2013) Metal oxide thin films and nanostructures for self-cleaning applications: Current status and future prospects (A review article) The European Physical Journal: Applied Physics 62 30001 (12 pages). <https://www.epjap.org/articles/epjap/abs/2013/06/ap130048/ap130048.html>
26. D DPurkayastha, M G Krishna, **V Madhurima** (2014) Molybdenum doped tin oxide thin films for self-cleaning applications Materials Letters 124, 21-23. <https://www.sciencedirect.com/science/article/abs/pii/S0167577X14003784>
27. **Madhurima V** (2013) Red rose Vs. Lotus leaf: to roll or not to roll – (Research Highlight) Physics Academy of North East (PANE) Newsletter, Vol 2, 1, Pg 5.
28. **Madhurima V**, Sravya, O, Tumuluri, A. K C James Raju, (2014) Dielectric spectroscopy of binary liquid systems as prototypes for interactions in Biological systems - Proceedings of IEEE International Conference on Dielectric Liquids (ICDL) held at Bled, Slovenia 29-July 3, 2014 pp 1-3. <https://ieeexplore.ieee.org/author/37888439200>
29. **Madhurima V**, K Greeshma Priyanka, K S N D Pavan, S Nagarajan (2014) Analysis of wetting of Perylene diimide thin films on glass by water, Key Engineering Materials, 594-595 pp 1074-1077. (IF: 0.2) <https://www.scientific.net/KEM.594-595.1074>
30. D DPurkayastha, L D Sangani Varma, M G Krishna and **V Madhurima** (2014) [Photo-induced wettability of TiO₂ film with Au buffer layer AIP Conference Proceedings, Volume 1591, Issue 1, p.881-883.](http://www.aip.org/conference-proceedings)
31. **V Madhurima** Droplets in Microchannels - theory and experiment - Article – Physics

- Academy of North East (PANE) E-newsletter Vol.3 iss 1 November 2014 PP 20-21.
32. U P Shaik, D DPurkayastha, M G Krishna, **V Madhurima** (2015) Nanostructured Zn and ZnO nanowire thin films for mechanical and self-cleaning applications. Applied Surface Science. 330, 292-299 <https://www.sciencedirect.com/science/article/abs/pii/S0169433215000379>
 33. D DPurkayastha, R Brahma, M G Krishna, and **V Madhurima** (2015) Effects of metal doping on photoinduced hydrophilicity of SnO₂ thin films Bulletin of Materials Science 38 (1) 203 – 208. <https://www.ias.ac.in/describe/article/boms/038/01/0203-0208>
 34. **V Madhurima** (2015) Molecular interactions and designer materials, Invertis journal of Renewable Energy 5 (1) pp 34-40. <http://www.i-scholar.in/index.php/InvertisJRE/article/view/166728>
 35. R Praveena, G. V. Rao, K. Balasubrahmanyam, M. Ghanashyam Krishna, **V. Madhurima** (2016) Optical and water repellent properties of Ag/SnO₂ bilayer thin films. *AIMS Materials Science*, 2016, 3(1): 231-244. <http://www.aimspress.com/article/doi/10.3934/matersci.2016.1.231>.
 36. **V Madhurima** and K Nilavarasi Breath Figures and Soft Lithography – Article – Physics Academy of North East (PANE) E-newsletter Vol 3, issue 2 Pg 9 -11.
 37. **V Madhurima**, Molecular interactions and designer materials, *Invertis journal of Science and Technology* , (2015), 5 (1) pp 34-40.
 38. M D Prasad, UP Shaik, **V Madhurima**, MG Krishna Low temperature growth of ZnO nanostructures on flexible polystyrene substrates for optical, photoluminescence and wettability applications *Materials Research Express* (2016) 3 (8), 085010 <https://iopscience.iop.org/article/10.1088/2053-1591/3/8/085010>
 39. **V Madhurima**, K Nilavarasi De-pinning of contact line of droplets on rough surfaces *IOP - Journal of Physics: Conference Series* ISBN: 978-1-5108-3182-7 ISSN: 1742-6588 (2016)765 (1), 012001 <https://iopscience.iop.org/article/10.1088/1742-6596/765/1/012001>
 40. **Madhurima V** and Anina Anju B Microwave Diathermy for Oncology Therapy Physics Academy of North East (PANE) E-newsletter 2018 Vol 4, Iss3, Pg19-25.
 41. **V Madhurima**, A Harindran Probing the onset of structural instabilities as a tool for detection of staling of dairy milk: A permittivity and conductivity study. *AIP Conference Proceedings* (2017) 1953 (1), 050005 <https://doi.org/10.1063/1.5032660>
 42. Komal Kabara, **V. Madhurima**, Ashok C. Kumbharkhane, Arvind V. Sarode Study of H1 spin lattice relaxation and dielectric relaxation in Poly(propylene glycol) system *Materials Chemistry and Physics* (2018) 209,16-22 <https://www.sciencedirect.com/science/article/abs/pii/S0254058418300208>
 43. K Nilavarasi, T R Kartha, **V Madhurima** Evidence of anomalous behavior of intermolecular interactions at low concentration of methanol in ethanol-methanol binary system *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* (2018) 188, 301-310 <https://www.sciencedirect.com/science/article/abs/pii/S1386142517305747>
 44. K. Nilavarasi, **V. Madhurima**, Controlling breath figure patterns on PDMS by concentration variation of ethanol-methanol binary vapors *European Physical Journal E* (2018) 41: 82 https://epje.epj.org/articles/epje/abs/2018/07/10189_2018_Article_11691/10189_2018_Article_11691.html
 45. K. Nilavarasi, **V. Madhurima**, Influence of polar and dispersive part of surface tension on the self-assembly of droplets on PDMS surfaces *Materials Today: Proceedings* 5(8), Part 3, 2018, Pages 16424-16432 <https://www.sciencedirect.com/science/article/pii/S2214785318310964>
 46. K Nilavarasi Ramkumar Santhanagopal, **V Madhurima**, 1D roughness driven depinning of self-assembly of liquid droplets *Langmuir* 35,45, (2019) 14576-14585 <https://pubs.acs.org/doi/abs/10.1021/acs.langmuir.9b02600>
 47. Aswini Harindran and **V Madhurima**, On the efficacy of dielectric spectroscopy in the identification of onset of the various stages in lactic acid coagulation of milk *J. Microwave Power and Electromagnetic Energy* Volume 54, 2020 161-181 <https://www.tandfonline.com/doi/abs/10.1080/08327823.2020.1755484>

48. Aswini Harindran, Sabin Hashmi and **V Madhurima**, Pattern formation of dried droplets of milk during different processes and classifying them using artificial neural network Journal of Dispersion Science and Technology <https://doi.org/10.1080/01932691.2021.1880927>
49. K Nilavarasi and **V Madhurima**, Novel method for determination of contact angle of highly volatile liquids Physics Education ISSN 0970-5953 (On UGC Care list) <http://www.physedu.in/current-issue>
50. Swathi P V, Abdulkareem U, Thejus R Kartha, **V Madhurima**, Hydrogen Bonding in 1-Propanol-Ethanol Binary Mixture: Experimental and Modeling Approaches ChemistrySelect Article DOI: [10.1002/slct.202200413](https://doi.org/10.1002/slct.202200413) Internal Article ID: 17394340 Article ID: SLCT202200413
51. Abdulkareem U, Thejus R Kartha, **V Madhurima**, Hydrogen-Bonded Networks in Acetone-Alcohol Binary Mixture: Molecular Dynamics Study; Accepted in Journal of Molecular Modeling <https://doi.org/10.1007/s00894-022-05369-4>
52. **V. Madhurima**, Ram Ramaswamy, Deepa Chari, Vandana Nanal, Tanushri Saha-Dasgupta Response to the COVID-19 Pandemic: Physics Teaching in India (2022) [arXiv:2211.13482v1](https://arxiv.org/abs/2211.13482v1) <https://doi.org/10.48550/arXiv.2211.13482>
53. Srubabati Goswami, Aru Beri, Bindu Bambah, Deepa Chari, **V. Madhurima**, Gautam Menon, Vandana Nanal, Pragya Pandey, Tanusri Saha-Dasgupta, Aditi Sen-De, Prajval Shastri Gender Equity in Physics in India: Interventions, Outcomes, and Roadmap [arXiv:2301.03830v1](https://arxiv.org/abs/2301.03830v1) <https://doi.org/10.48550/arXiv.2301.03830>
54. Emanuel Daimari, **V Madhurima** Dessication Crack and Absorbability (2023) PANE Newsletter March 2023
55. Swathi P V and **V Madhurima** Porous polymer film formation by water droplet templating using polystyrene (2023) The European Physical Journal E (Soft Matter and Biological Physics)(Springer) DOI:[10.1140/epje/s10189-023-00282-x](https://doi.org/10.1140/epje/s10189-023-00282-x) <https://link.springer.com/article/10.1140/epje/s10189-023-00282-x>
56. Abdulkareem U, Thejus R Kartha, **V Madhurima** Radial Distribution and Hydrogen Bonded Network Graphs of Alcohol-Aniline Binary Mixture, Journal of Molecular Modeling. 2023. <https://doi.org/10.1007/s00894-023-05558-9>

CHAPTERS PUBLISHED IN BOOKS

1. J Lalnunsiam, **V Madhurima** Anchoring of amino acids on glass- a wetting study. Recent Trends of Research in Physics, ACB publications. Ed: B K De, D Bhattacharjee, S Chattopadhyaya, S A Hussain, A Guha. ISBN: 978-81-904362-9-8 Publisher: Research India Publications, New Delhi (Edition : 2012) Pp: 181-186
2. **V Madhurima** (2015) Wetting studies as enablers for recycling and reuse of microfluidic devices" in "Material Science and Technology: Problems and Solutions on Recycling and Reuse" Ed: Jithin Joy, Deepu A. Gopakumar, Avinash.M.S, Sabu Thomas, Maciej Jaroszewski, Apple Academic Press..
3. **V. Madhurima**, K. Nilavarasi Self-Assembly of Droplets on 1D and 2D Patterned Surfaces: A Review, Apple Academic Press Ed: Sabu Thomas, Yves Grohens, Nandakumar, Oluwatobi Samuel Oluwafemi, Praveen K. M. Hard ISBN: 9781771886345 E-Book ISBN: 978-1-77188-634-5 400 pages, 3-40 <https://www.appleacademicpress.com/nanotechnology-driven-engineered-materials-new-insights/9781771886345>
4. P. Sri Harsha, K. Venkata Saravanan, and **V. Madhurima** High- κ Dielectric Materials: Structural Properties and Selection Apple Academic Press and CRC Press, Ed;/ N P Maity, R Maity and S Baishya ISBN hard: 978-1-77188-843-1. Cat#: K441127 ISBN ebook: 9780429325779. Cat#:KF13057 278pages <https://www.taylorfrancis.com/chapters/edit/10.1201/9780429325779-3/high-dielectric-materials-structural-properties-selection-sri-harsha-venkata-saravanan-madhurima?context=ubx&refId=104a7ccb-418d-4d79-82df-f73e8f3fecde>

5. Aswini Harindran and **V Madhurima** Chapter 14. Chapter Title: Pattern Formation Studies during Different Milk Processes. Advanced Microscopy: A strong analytical tool in material science. Apple Academic Press (AAP). Hard ISBN: 9781774910429 Pages: Approx. 322p w/index July 2022
<https://www.appleacademicpress.com/advanced-microscopy-a-strong-analytical-tool-in-materials-science/9781774910429>
6. **V Madhurima** COVID-19 Risks Deepening Existing Disparities in Indian Educational Institutions Higher Education Going Online Ed: Sujin Babu and Ram Ramaswamy Indian Academy of Science, Bengaluru ISBN: 978-81-950664-5-2 (2021) 53-56
[https://www.ias.ac.in/Publications/e-Books/Higher Education Going Online](https://www.ias.ac.in/Publications/e-Books/Higher_Education_Going_Online)

CONFERENCE PROCEEDINGS

1. **Madhurima V** and K C James Raju (2006) Simulations of defect EBG resonators for the determination of complex permittivity of liquids, gels and powders Proceedings of National Conference Microwave 2006. 306-311.
2. **Madhurima V** (2008) Microwave and THz Remote Sensing Lecture notes on Short term training programme on Applications of Lasers in Sensing and Measurements, Department of Engineering Design, IIT Madras.
3. **Madhurima V** and D DPurkayastha (2010) Concentration variation of wettability on substrate (ITO), Proceedings of Sensors-15 15th National Seminar on Physics and Technology of Sensors, Ed S A Gangal. Pg C-2-1 to C-2-2.
4. **Madhurima V** and Jonathan Lalnunsiam (2010) Simulations of interactions in 1,4 dioxane-water systems, Proceedings of Sensors-15 15th National Seminar on Physics and Technology of Sensors, Ed S A Gangal. Pg C-3-1 to C-3-2.
5. J Lalnunsiam, **V Madhurima** (2012) Anchoring of amino acids on glass- a wetting study, Recent Trends of Research in Physics, ACB publications, 181-186. Ed: B K De, D Bhattacharjee, S Chattopadhyaya, S A Hussain, A Guha
6. **Madhurima V** and K Venkata Saravanan Research based Pedagogical Protocols for Laboratory Courses National Conference on "Student Driven Research for Inspired Learning" in Science and Technology, NCIL-2015, October 16-17, 2015 Delhi. BEST ORAL PRESENTATION <https://www.ijsrd.com/articles/NCILP019.pdf>
7. **Madhurima V** COVID-19 Risks Deepening Existing Disparities in Indian Educational Institutions Confluence Editorially moderated online discussion forum of IAS Ed: Ram Ramaswamy and Sujin Babu
[http://confluence.ias.ac.in/covid-19-risks-deepening-existing-disparities-in-indian-educational-institutions/ as a part of "New Directions in Higher Education in India after COVID-19"](http://confluence.ias.ac.in/covid-19-risks-deepening-existing-disparities-in-indian-educational-institutions/ as a part of)
8. **Madhurima V** So near yet so far Confluence Editorially moderated online discussion forum of IAS Ed: Suthirth Dey and Shubasree Desikan
[http://confluence.ias.ac.in/so-near-yet-so-far/ as a part of "Under-represented groups in academia: issues and way forward"](http://confluence.ias.ac.in/so-near-yet-so-far/ as a part of)
9. Physics News published by Indian Physics Association has published an article about DFOT titled "A Discussion Forum for Online Education: Teaching Physics during the pandemic" by **V Madhurima** and Ram Ramaswamy in December 2020 (Oct-Dec '20 issue)
https://www.tifr.res.in/~ipa1970/news/2020/OctDec/Oct_Dec_2020_final.pdf
10. **V Madhurima** Wind beneath the wings Confluence Editorially moderated online discussion forum of IAS <http://confluence.ias.ac.in/wind-beneath-the-wings/> Ed: Suman Chakrabarty and Shiju Sam Varughese [http://confluence.ias.ac.in/wind-beneath-the-wings/ as a part of "Mentor-Mentee Relationships in Academia: Nature, Problems and Solutions"](http://confluence.ias.ac.in/wind-beneath-the-wings/ as a part of)
11. **V Madhurima**, Aditi De, Prajval Shastri *Report on the 7th IUPAP International Conference for Women in Physics* News 2021 Vol 51(4) 31-32 2021.
12. Sangeetha Sriraam and **V Madhurima**, Enabling institutional practices for gender equity in HEI, XLVI Indian Social Science Congress January 27-31, 2023. Bharatidasan University. Full Paper.
13. **V Madhurima** Regulated Infantilization: protection or roadblock? 8th IUPAP international conference for women in Physics – ICWIP 2023.

14. P V Swathi and **V Madhurima** Breath Figure Formation Using PDMS^{8th} IUPAP international conference for women in Physics – ICWIP 2023.
15. Srubabati Goswami Vandana Nanal, Tripta Bhatia, Deepa Chari, Moon Moon Devi, Debashis Ghoshal, **V Madhurima** Krushna Mavani Pragma Pandey Toward Gender Equity in Physics: The Changing Scenario in Indian Academia 8th IUPAP international conference for women in Physics – ICWIP 2023.

CONFERENCE PAPERS

1. Murty V S, & **V Madhurima** (Jan 1993) Recent studies in Pterocarpus santalinus, National Bio-Physics Symposium, Anantapur.
2. **Madhurima V** & V S Murty (16 to 21 July 1995) ESR studies on Pterocarpus santalinus - ISMAR conference - Sydney -Australia.
3. Sathyan N, V Santhanam, **V Madhurima** & J Sobhanadri (Oct 1994) Dipole moment of methanol-acetone binary mixture from microwave dispersion method and semi-empirical and ab initio calculations VIII National conference on Ferroelectrics and Dielectrics, Nagpur.
4. **Madhurima V**, V R K Murthy & J Sobhanadri (Dec 1998) Dielectric reorientational mechanism: a comparison between binary systems containing acetonitrile and acrylonitrile X National seminar on Ferroelectrics and Dielectrics December 16-18 1998 - Indian Institute of Technology - Madras.
5. **Madhurima V**, V R K Murthy & J Sobhanadri (Dec 1998) 13C NMR spin- lattice relaxation mechanism in binary mixtures of polar liquids: A comparison with dielectric relaxation -role of group relaxation X National seminar on Ferroelectrics and Dielectrics December 16-18 1998, Indian Institute of Technology - Madras.
6. **Madhurima V**, V R K Murthy and M S Moni (Aug 29- 31 2001) Experimental Verification of computational conformational analysis using 13C NMR chemical shifts National Seminar on Solid State Spectroscopy Venkateshwara University -Tirupathi.
7. **Madhurima V** (Nov 14-16, 2002) Teaching Physics to Dental Mechanics and Surgeons, 17th IAPT Annual Convention and theme symposium on "Physics of biomedical Instrumentation as special theme" - Gulbarga.
8. **Madhurima V** (Oct 21-23, 2005) Computer Acolytes for teaching Physics to Engineering Students, 20th IAPT Annual Convention and theme symposium on "Impact of Information Technology on Physics Education" – Bhubaneswar.
9. **Madhurima V** and K C James Raju (Dec 1-2 2005) Simulation of cavity perturbation technique for validation of dielectric permittivity measurement procedure at microwave frequencies accepted for presentation at the National Seminar of ANSYS at Bangalore.
10. **Madhurima V** and K C James Raju (2006) Simulations of defect EBG resonators for the determination of complex permittivity of liquids, gels and powders. Accepted for oral presentation at the National conference on recent advancements in Microwave technique and applications to be held in October 2006.
11. **Madhurima V** and K C James Raju (2006) FEM simulation of ferroelectric thin films based micro-bolometer. Submitted to ANSYS India Conference Engineering Innovations 9-10th November 2006.
12. **Madhurima V** and K C James Raju (2006) A procedure to understand the properties of residual process liquids in MEMS National conference on applications of MEMS to Aerospace. Research Center Imarat (RCI)- Hyderabad. December 1-2.
13. Nandiraju V S Rao, M K Paul, Rajdeep Deb, Rahul Kanthi Nath, T D Choudhury, **V Madhurima** and G Padmaja Rani (2008) Dielectric Investigations in achiral W-shaped compounds Special International Conference on Liquid Crystals. Indian Institute of Science October 13-15.
14. Nandiraju V S Rao, M K Paul, Rajdeep Deb, Rahul Kanthi Nath, T D Choudhury, G Padmaja Rani and **V Madhurima** (2008) Dielectric investigations in achiral bent core compounds Special International Conference on Liquid Crystals. Indian Institute of Science October 13-15.

15. **Madhurima V** and Zoramchhana (2008) Computational dielectric studies of weakly bonded binary systems International conference on Recent Advances in Microwave Theory and Applications, November 20-25th, University of Rajasthan, Jaipur.
16. **Madhurima V** and D DPurkayastha (2010) Concentration variation of wettability on substrate (ITO), Sensors-15 15th National Seminar on Physics and Technology of Sensors
17. **Madhurima V** and Jonathan Lalnunsiana (2010) Simulations of interactions in 1,4dioxane-water systems, Sensors-15 15th National Seminar on Physics and Technology of Sensors. March 4-6
18. D DPurkayastha, **V Madhurima**, K Venkata Saravanan and K C James Raju (2010) Determination of polar and dispersive component of the surface energy of BaTiO₃ by contact angle measurement PANE 2010, Imphal 5-6 October 2010.
19. Nandiraju V S Rao, M K Paul, Rajdeep Deb, Rahul Kanthi Nath, T D Choudhury and **V Madhurima** Influence of cholesterol moiety on the mesomorphic behavior in three and four ring bent core compounds, 17th National Liquid Crystal Conference at Surat November 15-17, 2010.
20. G. Padmaja Rani, D.L. Mohan Rao, U.V. Ramireddy, Lopamudra Chakraborty, Nirmalangshu Chakraborty, **V. Madhurima** and Nandiraju V S Rao, Influence of bridging group on dielectric properties in compounds possessing an end cyano moiety exhibiting nematic phase 17th National Liquid Crystal Conference at Surat November 15-17, 2010.
21. Nandiraju V S Rao, M K Paul, Rajdeep Deb, Rahul Kanthi Nath, T D Choudhury and **V Madhurima** Investigation of relaxation processes in nematic phase of high k-liquid crystalline compounds with different bridging groups, 17th National Liquid Crystal Conference at Surat November 15-17, 2010.
22. V Madhurima, Influence of technology and globalization on the living of Bharatanatyam artists, UGC sponsored three day national seminar on human rights education at Dravidian University, 8-10 December, 2010
23. **Madhurima V**, D DPurkayastha, K Sudheendran and K C James Raju (2011) A correlation between dielectric permittivity and wettability for low energy surfaces like BZN on fused silica, IEEE ICDL conference June 26-30, 2011 at Trondheim, Norway.
24. D DPurkayastha, N V S Rao and **V Madhurima** (2011) Effect of annealing temperature on the photoluminescence property of ZrO₂ thin film deposited on fused silica, Condensed Matter Days, Guwahati University, August 24-26, 2011.
25. **Madhurima V** and Jonathan Lalnunsiana (2011) Wettability studies of Aluminum oxide substrate using binary mixtures of aniline and alcohols, Condensed Matter Days, Guwahati University, August 24-26, 2011.
26. D DPurkayastha, Rajeeb Brahma, M Ghanashyam Krishna and **V Madhurima**, Effect Mn doping on photo-induced hydrophilicity of SnO₂ thin film prepared by thermal evaporation,, International Conference on Material Science (ICMS2013) held at Department of Physics, Tripura University during 21-23 February 2013.
27. **Madhurima V** (2013) Designing materials using soft matter for naval applications, ADNAM 2013, February 6-7, NIOT, Chennai.
28. **Madhurima V**, K Greeshma Priyanka, K S N D Pavan, S Nagarajan (2014) Analysis of wetting of Perylene diimide thin films on glass by water, ICAMET, Bandung, Indonesia, Nov 27-29, 2013.
29. D DPurkayastha, L D Sangani Varma, M G Krishna and **V Madhurima** (2013) Photo-induced wettability of TiO₂ film with Au buffer layer DAE-SSPS symposium held at Patiala in Thapar University, December 17-21, 2013.
30. **Madhurima V**, O Sravya, Anil Tumuluri and K C James Raju (2014) Dielectric spectroscopy of binary liquid systems as prototypes for interactions in Biological system IEEE-ICDL held at Bled, Slovenia.
31. K Nilavarasi, **V Madhurima** Wetting study of Prosopisjuliflora for prospects in biomimicry based superhydrophobicity, NCCTSM CUTN, March 19th and 20th 2015
32. **Madhurima V**, P Vineetha, G.PTheja, P.Muhammed Salman, K VenkataSaravanan Vibrational Studies of Ethylene Glycol–Ethanol Binary System NCCTSM CUTN, March 19th and 20th 2015
33. R Syam Kumar, **V Madhurima** Ab initio conformal analysis of some ethanol-alcohol systems NCCTSM CUTN, March 19th and 20th 2015

34. **Madhurima V**, Dinesh Kumar K Nilavarasi and M.S. Ramachandra Rao Roughness dependent dispersive forces of diamond thin films NCCTSM CUTN, March 19th and 20th 2015.
35. R. SyamKumar , Geo Sunny , Aswini Harindran , K Venkata Saravanan , **V. Madhurima** Study of solvation of Glycine molecule NCCTSM CUTN, March 19th and 20th 2015.
36. K Nilavarasi and **V Madhurima** Biomimicry inspired patterning of PDMS and Polystyrene for non-wetting applications, International Conference on Nanostructured Polymeric Materials and Polymer Nano-composites (ICNPM 2015) Mahatma Gandhi University, Kottayam, and Kerala, India. Invited talk. 13-15 November 2015
37. K Nilavarasi and **V Madhurima** Influence of polar and dispersive part of surface tension on the self- assembly of droplets on PDMS surfaces SCICON'16 International Conference on 'Advanced Materials' Amritha University. Coimbatore December 19, 2016
38. Aswini Harindran and **V Madhurima** Probing the Onset of Structural Instabilities as a Tool for Detection of Staling of Dairy Milk: A Permittivity and Conductivity Study 2nd International Conference on Condensed Matter (previously accepted to IEEE-2017 in Manchester, England. Did not present) Bikaner, Rajasthan 24 - 25 November, 2017.
39. Aswini Harindran and **V Madhurima**, "An Experimental Investigation of Dried Droplet Patterns during Milk Dilution" Second World Congress on Microscopy: Instrumentation, Techniques and Applications and Life Sciences and Materials Sciences (WCM 2018), Kottayam, Kerala, 10-12 August 2018.
40. Anina Anju B and **V Madhurima**, "A Study of the Pattern left from the Drying Drops of Amino Acid Aqueous Solutions" Second World Congress on Microscopy: Instrumentation, Techniques and Applications and Life Sciences and Materials Sciences (WCM 2018), Kottayam, Kerala, 10-12 August 2018.
41. **Madhurima V**, Bala P, Nilavarasi K, Arpita Shukla, Rajalakshmi A, Kaviarasan, Rohini PD, Jayalashmi Krishnan A comparison of changes in surface tension of water in breeding sites during vector surveillance at Thiruvavur district of Tamil Nadu and Lakshadweep Islands 14th International Conference on Vectors and Vector Borne Diseases Bhubaneswar, Odisha 9-11 January, 2019
42. K Nilavarasi and **V Madhurima** Simulation of equilibrium shape and contact angle of volatile liquid drops on smooth and constrained surfaces IAPT 2nd Convention CUTN 18-19 January 2019
43. Aswini Harindran and **V Madhurima** An Experimental Investigation of Milk Coagulation using Dried Droplet Patterns IAPT 2nd Convention CUTN 18-19 January 2019
44. Aswini Harindran and **V Madhurima** Patterns Produced By Dried Droplets as A Tool to Detect Milk Staling International Conference on Frontiers in Materials from Basic Science to Real time Applications Jain University 13-16 March 2019
<https://www.jainuniversity.ac.in/events/international-conference-on-frontiers-in-materials-from-basic-science-to-real-time-applications>
45. Aswini Harindran and **V Madhurima** Influence of fat content on adhesion of commercial milk to smooth and constrained surfaces Pressing for Progress University of Hyderabad 19-21 September 2019
<https://progress2019.tifrh.res.in/programme.php>
46. **V Madhurima** "Best poster award" Women in Physics at CUTN- a case study Pressing for Progress University of Hyderabad 19-21 September 2019
<https://progress2019.tifrh.res.in/programme.php>
47. M. Anjaneyulu, a M. Anju, S. Veeresh Kumar, **V. Madhurima**, Peter Muller, Roger Alberto, and V. Rajendiran Design and synthesis of thiophene based 17 β -hydroxysteroid dehydrogenase type 5 (17 β - HSD5) inhibitors to target hormone dependent cancers National Conference on Frontiers in Chemical Sciences, NCFC-2020 March 29-30, 2021, Department of Chemistry, Central University of Tamil Nadu.
48. **V Madhurima**, Ram Ramaswamy, Deepa Chari, Vandana Nanal and Tanusri Saha Dasgupta Impact of COVID-19 pandemic on Physics teaching in India IUPAP ICWIP 2021 Virtual on Whova platform June 11-16, 2021
49. Srubabati Goswami, Aru Beri, Bindu Bambah, Deepa Chari, **V Madhurima**, Gautam Menon, Vandana Nanal, Pragya Pandey, Tanusri Saha-Dasgupta, Aditi De-Sen, Prajval Shastri

Gender Equity in Physics in India: interventions, outcomes and roadmap IUPAP ICWIP 2021 Virtual on Whova platform June 11-16, 2021

<https://wp.csiro.au/icwip2020/>

50. Abdulkareem U, Thejus R Kartha, **V Madhurima**. Study in Acetone-Isopropanol Binary Mixture; International Conference on Advanced Materials Mechanical Characterization. (ICAMMC 2021), SRM IST, Chennai 02-04 December, 2021
51. Swathi P V, Ram Kumar S G, **V Madhurima**(poster presentation). Breath Figure Formation Using Polystyrene International Conference on Advanced Materials Mechanical Characterization (ICAMMC 2021), SRM IST, Chennai 02-04 December, 2021
52. Abdulkareem U Thejus R Kartha, **V Madhurima**. (Oral presentation; awarded third best presentation) Hydrogen bonding in 1-Hexanol-Acetone Binary Mixture: Molecular Dynamics Study National Science Day Celebration, Department of Physics, Central University of Tamil Nadu 28 February, 2022
53. Swathi P V, Ram Kumar S G, V Madhurima Pattern Formation using Polystyrene; National Science Day Celebration, Department of Physics, Central University of Tamil Nadu 28 February, 2022
54. Swathi P V, Ram Kumar S G, V Madhurima Time Scale Analysis of Pattern Formation Using Polystyrene; International Conference on Hierarchically Structured Materials, ICHSM 2022 SRM University, Ramapuram, Chennai. 24,25 March
55. Abdulkareem U, Thejus R Kartha, **V Madhurima**. Hydrogen bonding in Aniline-Isopropanol Binary Mixture: Molecular Dynamics Study; National Conference on Nanomaterials driven Advances in Chemical and Biosensors (NanoSe 2022), Alagappa University, Karaikudi (poster presentation). 23-25 March 2022
56. **V Madhurima**, S G Ram Kumar and P V Swathi Self-assembly of micro and nanosized liquid drops International Online Conference on Nano Materials Mahatma Gandhi University, Kottayam, Kerala, India 12th to 14th August 2022
57. [Sangeetha Sriraam and V Madhurima, Enabling institutional practices for gender equity in HEI, XLVI Indian Social Science Congress January 27-31, 2023. Bharatidasan University.](#)
58. [V Madhurima Regulated Infantilization: protection or roadblock? 8th IUPAP international conference for women in Physics – ICWIP 2023.](#)
59. [P V Swathi and V Madhurima Breath Figure Formation Using PDMS8th IUPAP international conference for women in Physics – ICWIP 2023.](#)
60. [Srubabati Goswami Vandana Nanal, Tripta Bhatia, Deepa Chari, Moon Moon Devi, Debashis Ghoshal, V Madhurima Krushna Mavani Pragya Pandey Toward Gender Equity in Physics: The Changing Scenario in Indian Academia 8th IUPAP international conference for women in Physics – ICWIP 2023.](#)

RESOURCE PERSON/TALKS

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
1	"Introduction to MEMS and their simulations"	Colloquium/ Seminar	School of Physics, University of Hyderabad	14 th November 20 04	Talk
2	Liquid Dielectrics – Experiments and Simulations	Short Term Training Program (STTP) on "Novel Studies and Applications of Microwave Frequency Radiation for Science and Technology of Future" conducted by Dr V R K Murthy	IIT Madras	5 th -11 th December 2005 (on 9 th)	Resource Person
3	Communication Systems	Jawahar Navodaya Vidyalaya's National level Refresher	Navodaya Teacher Training Institute, Gachibowli,	06-07-06 to 15-07-06 (on 15 th)	Resource Person

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
		Course for PGTs (Phy./Maths)	Hyderabad		
4	Microwave and THz remote sensing	Applications of Lasers in Sensing and Measurements conducted by Dr N J Vasa,	Department of Engineering Design, IIT Madras,	14-19 July 2008 (on 16 th)	Resource Person
5	Weak inter-molecular forces in liquids confined to restricted geometries: Applications to microelectronics	"Physics Retreat" conducted in connection with the global PAN-IIT meet	Department of Physics, IIT Madras	20 th December 2008	Invited Talk
6	Innovative experiments for UG teaching	Innovative experiments and technological advances at UG course in Physics	MooljiJaitha College, Jalgaon	29th January, 2010.	Resource Person
7	Research Methodology in Sciences	Department of Physics	MooljiJaitha College, Jalgaon	30 th January, 2010	Talk
8	Introduction to Remote sensing of Environment	Refresher course in Environmental Science	Mizoram University	26 th July to 17 th August 2010	
9	Remote sensing of Environment- a multi-disciplinary science	Refresher course in Environmental Science	Mizoram University	26 th July to 17 th August 2010 on 30.07.2010.	Resource Person
10	Dielectric Spectroscopy of Liquids	Refresher course in Physical Sciences	Mizoram University	24 th August 2010	Resource Person
11	Introduction to BioMEMS and their surface studies	Refresher course in Life Sciences on Recent Advances in Life Sciences	Mizoram University	21 st September 2010	Resource Person
12	Concept of Space and Time in History	Refresher course in Department of History	Mizoram University	11 th October 2010	Resource Person
13	Ab initio simulations of molecular interactions: application to BioMEMS	National workshop on Modeling Biological Systems conducted by NEHU-ISI (Kolkata)	North Eastern Hill University (NEHU) Shillong	25 and 29 November 2010 on 29 th November.	Resource Person
14	van der Waal's forces and MEMS design	National Workshop on Advances in Electronics, Communication & Information Technology (AECI-2011)	Department of Electronics and Communication Engineering, Mizoram University	23-26 th March 2011 on 26 th March	Resource Person
15	Hydrogen bonded	Colloquium	IIST, Trivandrum	11 th April	Invited

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
	binary systems			2011	talk
16	Protein-Protein interactions: An experimental Perspective	National workshop on Modeling Biological Systems II	Mizoram University	Aug.21-25, 2012. On 25 th	Resource Person
17	Investigations of smart materials	National Conference on Recent trends in advance materials sponsored by CSIR	JayarajAnnapackiam Women's College, Periyakulam	Feb 5-6, 2013	Resource Person
18	Wetting studies as enablers for recycling micro-electronic devices"	Third International Conference on Recycling and Reuse of Materials (ICRM 2014)	MG University, Kottayam	on 11-14 th April, 2014	Invited Talk Chaired Sessions
19	Microfluid Dynamics	National Conference on Recent Trends and Developments on Radiation Dosimetry CRD2014	Rajalakshmi Engineering College, Chennai	October 9 th and 10 th , 2014	Keynote Speaker
20	Controlling wetting	Department of Mechanical Engineering/ Engineering Science Programme,	National University of Singapore.	December 3 rd 2014	Invited talk
21	Combined Photocatalytic-hydrophobic properties of ceramic oxides: Application to water purification	International Conference on Energy, Water and Environmental Science and Technology (ICEWEST-2015)	Presidency College, Chennai	5 th and 6 th February, 2015	Invited talk Chaired Sessions
22	Biomimicry inspired patterning of PDMS and Polystyrene for non-wetting applications	International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015)	MG University, Kottayam	13-15 November 2015	Invited Talk, also chaired sessions
23	Recent Advances in Self-Assembled Liquid Droplet Structures	Condensed Matter Days (CMDAYS) Sponsored by IoP, Bhubaneswar	Mizoram University	August 29-31, 2016,	Invited Talk
24	Patterns and Patterning in Fluid-Surface Interactions.	Department of Biomedical Engineering	Rajalakshmi Engineering College	20-02-2018	Invited Talk
25	Leadership and team building	Department of Applied Psychology,	CUTN	31-07-2017	Invited Talk
26	Space in arts and Physics	Department of English Studies,	CUTN.	6 th October 2017,	Invited Talk
27	Menstrual Health and Related Issues among Working Women-	National Seminar on Menstruation and Menstrual Hygiene Management: A rights-	CUTN	16 th March 2018	Invited Talk Chaired

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
	A Case Study of Central University of Tamil Nadu, Thiruvarur	based approach sponsored by National Commission for Women, Delhi,			sessions
28	Tweaking Self-Assembly Patterns	Department of Physics	Assam University	31/05/2018	Talk
29	Evidence of metastable states in self-assembled wetting patterns	Center for Nano Technology	University of Hyderabad	21/08/2018	Talk
30	Prevention Measures: Government intervention NDPS act 1985	One day awareness program on drug abuse, prevention for school children, Teachers and Parents	Government Boys High School, Kattur	21/02/2019	Talk
31	Drug abuse, reason and repercussion, types of drugs – signs and symptoms	One day capacity building cum sensitization programme on drug abuse for college students	Nethaji Subhash Chandra Bose College, Thiruvarur	22/02/2019	Talk
32	Droplet drying patterns in coagulation of dairy milk	FRACMEET 2019	Institute of Mathematical Sciences, Chennai	4/3/2019	Invited Talk (with Aswini Harindran)
33	Unique breath figures on soft surfaces	Physics at surfaces and interfaces of soft materials' (PSISM-2019)	Jadavpur	26/09/2019	Invited Talk
34	Physics and Dance		Ashoka University	30/10/2019	Colloquium
35	Lubrication driven hierarchical self-assembly of droplets	Fracmeet 2020 With Aswini Harindran	SRM Amaravathi	5-7/2/2020	Invited Talk
36	A balancing act: Physics of Movement and Dance	Science at the Sabha	Music Academy	16/02/2020	Public Lecture
37	Women in Physics talk + Exhibition of women in Physics	As IPA member, at CUTN	CUTN	28/02/2020	Public lecture – reported In Physics Today
38	Self-assembly: a natural method to produce large scale structured surfaces	Science Day celebrations	Sastra University	26/02/2020	Invited Lecture
39	Presentation Skills	Webinar on Research	GITAM-	25/06/2020	Invited

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
		Skill Development	Hyderabad		Lecture
40	Critical Thinking and Argumentation	Webinar on Research Skill Development	GITAM-Hyderabad	25/06/2020	Invited Lecture
41	Drops, Droplets and their Drying Patterns: A COVID-19 perspective.	Webinar	Chennai Science Colloquium	27/6/2020	Invited Lecture
42	Droplets: Properties and Relevance to Covid-19	1 st International e-Conference on Recent Advances in Physics & Materials Science-2020	Kurseong College, St. Josephs' College and CMP Research Center, Nepal	9 th July 2020	Chief Guest and Invited talk
43	Creating a safe workspace through Empathy	Web Symposium on Creating a better workplace for women	Assam University ICC	29 th July 2020	Invited talk
44	Soft Condensed Matter Physics	Virtual Workshop on Collating Physics Resources for Teachers in Higher Education	NIEPA, New Delhi	19 th August 2020	Invited talk
45	Astronomy and Astrophysics	Online interaction on Astronomy and Astrophysics	Kurseong College, Darjeeling	30 th September, 2020	Session Coordinator
46	Covid-19 and Higher Education: Online Teaching	5-Day National Webinar	Hrangbana College, Aizawl	7 th December, 2020	Resource Person
47	Online Education- 2 points of view	Sustainability of E-education as a close alternative to traditional education	Dept. Management, CUTN	17 th December, 2020	Resource Person
48	Women in STEM – Empowering Diversity in Science	National Webinar commemorating Global Women's Breakfast – IUPAC	Department of Physics, DG Vaishnav College, Chennai	9 th February 2021	Panellist
49	Higher Education Going Online - The Challenges in India	Centre for Learning, Development and Transformation,	Mount Carmel College, Bengaluru	20 th March 2021	Panellist
50	The tradition of Indian Astronomy	Vinn- Astronomy club of CUTN	CUTN	4 th June 2021	Talk
51	From classroom teaching to online – a paradigm shift (New pedagogy for teaching Physics)	New Pedagogy for teaching Physics	Philippines	19 th June 2021	Invited Talk
52	Understanding Online Teaching	Guru Nanak Dev University, Amritsar	GNDU	27 th June 2021	Invited Talk
53	AI Assisted Molecular Simulations	International Workshop on Computational Materials Engineering (CME-2021)	Tribhuvan University, Kathmandu, Nepal	6 th October 2021	Keynote Speaker & Advisor
54	Pedagogical	SPVM	SamahangPisika	30 th October	Invited

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
	Problems in Teaching Physics	ConVIRTUALisation	ng Visayas at Mindanao (SPVM), Philippines	2021	Speaker
55	Using AI to study the micron scale in milk colloids	International Conference on Material Science and Applied Physics (ICMSAP-2021)	Pachhunga College, Mizoram University	22-24 th November 2021	Invited Speaker
56	Stem: Narratives from the Field	UN International Day of Women and Girls in Science,	Southern Regional Committee of IAWS in collaboration with Tamil Nadu Science Forum	11 th February 2022	Panelist – panel discussion
57	Using AI/ML for optimal utility of food resources	National Seminar on Integrated approach in Science & Technology for sustainable future	AMET & Indian Association of Aquatic Biologist (IAAB), Hyderabad	28 th February, 2022	Invited Speaker
58	Gender equity in S & T for sustainable future	National Science Day 2022	Department of Women's Studies & RUSA 2.0 Thematic Research Projects – Social Sciences	28 th February, 2022	Invited Speaker
59	Self-Assembly and Hierarchy	National Science Day 2022	Department of Physics, CUTN	28 th February, 2022	Invited Speaker
60	Technology for Women	Two Day National Online Women Summit 2k22" on Women Empowerment as a part of Women's Day celebrations	KL University	9 th March 2022	Invited Speaker
61	Organizational Gender Culture and Climate in Promotion of Science	Organizational Gender Culture and Climate in Promotion of Science	Tezpur University	11 th March 2022	Invited Speaker
62	Challenges faced by gifted students in Universities and Colleges	Two-Day international seminar on Nurturing giftedness: The Goldmine	WCC, University of Madras	21 st and 22 nd April 2022	Plenary speaker
63	IQAC: Roles and Responsibilities IQAC meeting		College of Fisheries Engineering TNJFU Nagapattinam	22 nd July 2022	Invited Speaker
64	Desiccation Cracks – Big and Small	CMDAYS- 2022	NIT Dimapur	12-15 December 2022	Invited Speaker
65	-	Indian Social Science Congress	Bharatidasan University	27-31 January,	Chairman for the

S. No.	Title of Talk	Event	Venue	Date	Nature of Talk
				2023	first session of the special Gender Symposium
66	The artist-artisan gap: bridging discrimination with science?	Forum of Contemporary Thought	Department of English, CUTN	17 February 2023	Special invited talk
67	CUTN's Gender Policy		Department of Social Work, CUTN	2 nd March 2022	Panelist
68	Barriers to Women's Participation in the Digital Space	International conference on Gender Equality in the Digital Space: Barriers and Opportunities in Asia	Binary University, Malaysia	30th March 2023	Panelist

SEMINARS ATTENDED (WITHOUT PAPER PRESENTATION)

1. National Seminar on "Contents of Applied Sciences in Technical Education" 2nd March 2002 conducted by Indian Society for Technical Education at Jerusalem College of Engineering.
2. Cluster meeting of Space Application Centre conducted at NESAC, Shillong on 29.06.2007.
3. One day orientation for Teaching Faculty on Student Counselling and Mental Health, Student mentoring and Gender Sensitization in the work place" conducted by IQAC of Mizoram University. November, 2011.
4. 2nd International symposium on complex dynamical systems and applications (CDSA), January 9-11, 2012 at Presidency University, Kolkata.
5. National Seminar on Role of Higher Education in Transforming India conducted by Association of Indian Universities meet - 5-7 February, 2016, SP University, V V Nagar, Gujrat.
6. Pan IIT Digital Empowerment Program, At IIT Madras, Chennai on July 22nd 2017.
7. One day orientation workshop on the roles and responsibilities of the University and its SWAYAM coordinators" held on 2nd February, 2018 at the AICTE Office, Nelson Mandela Marg, Vasant Kunj, New Delhi.
8. Chairpersons of LOCF meeting with UGC (Instead of The Vice Chancellor, as Swayam coordinator), 18/09/2018 at UGC, Delhi.
9. Indian Academy of Science, 84th annual meet held at BHU, Varanasi during 2-4 November 2018

SELECTED ACADEMIC VISITS TO OTHER GROUPS

S.No	Place of Visit/ Person	Date	Purpose
1	Central University of Tamil Nadu	Various occasions between 2010 and 2012	to start the department of Physics
2	Mendiratta - Aveiro	23 th June 2014	Discussions regarding microwave coaxial setup
3	University of Padua - A F Borghesani	24 th to 29 th 2014 June	Academic discussions
4	University of Hyderabad	Various occasions	Academic collaborations leading to

		since 2007	multiple publications
5	Assam University	Various occasions between 2007 and 2012	Academic collaboration vide a Naval Research Board funded joint project
6	University of Tripura	Various occasions between 2010 and 2011	Academic interactions with Dr Syed Arshad Hussain
7	IIT Madras – Dr M S R Rao/ V R K Murthy	Various occasions since 2007	Academic discussions and collaborations
8	Institute of Physics, Bhubaneswar	14-17 November 2016	Academic Discussions and interactions with Prof. Somendra Bhattacharjee
9	Institute of Physics, Bhubaneswar	21 st -24 th May 2018	Academic Discussions and interactions with Prof. Somendra Bhattacharjee
10	Institute of Mathematical Sciences	15-17 April, 2019	Academic Discussions with Purusattam Ray and Vani Vemparala.

OTHER ACTIVITIES

<p>A. Member of NAAC-Peer Review Team</p> <ol style="list-style-type: none"> Jammu Govt. Parade College – December 22-23, 2018 Rani Channama University – September 1-3, 2021 	<p>B. Examiner</p> <ol style="list-style-type: none"> BTech – Anna University M.Tech IC Technology project, University of Hyderabad; MSc Physics – Assam University BSc Physics – Constituent colleges of Mizoram University
<p>C. Ph.D Adjudicator</p> <ol style="list-style-type: none"> IIT Madras Nagarjuna University Osmania University GITAM University Anna University Jawaharal Nehru Technical University Tribhuvan University, Nepal University of Hyderabad Central University of Himachal Pradesh 	<p>D. Reviewer</p> <ol style="list-style-type: none"> Bulletin of Material Science; Mediterranean journal of Chemistry; Transactions on Electrical and Electronic Materials; Editorial board member – MZU Annual journal for the Sciences. Indian Journal of Pure and Applied Physics Silicon – Springer, Int. J. Heat and Mass Transfer, RSC Advances, ScienceOpen Pramana Executive Editor, Physics Teaching Journal, IAPT, 2023.
<p>E. Reviewer (others)</p>	<p>F. Question paper setter</p> <ol style="list-style-type: none"> Madras University

<ol style="list-style-type: none"> UGC- Dr. D.S. Kothari Research Grant for Newly Recruited Faculty Members UGC - Research Grant for In-Service Faculty Members 	<ol style="list-style-type: none"> State Public Selection Examination – Mizoram State Public Selection Examination – Kerala Tamil Nadu State Eligibility Test - TNSET Shiv Nadar University – Madras Campus
G. Nation Level Committees <ol style="list-style-type: none"> CSIR-NET Observer, All India pre-medical pre-dental exam, Mat 3rd 2015. HBCSE Vigyan Pratibha Resource Generation- October, 2022; June 2023 Gender in Physics Working Group 2020-2022; 2022-24 (invited member) Member, India Country Team, IUPAP-International Conference on Women in Physics, July 2023. Secretary, Local Organizing Committee, IUPAP-International Conference on Women in Physics, July 2023. Vice-President, RC-13, IAPT, 2022-24.	F. Honorary Professor Teaching <ol style="list-style-type: none"> Women in STEM- Bharathidasan University – MA Women’s Studies

TEACHING

M.Sc., THESIS SUPERVISED (A one semester project for 4 credits based on original work):

S, No	Name	Title	Year/University	Co-Guide
1	Ms Lalangaihzuali	Ultrasonic studies of hydrogen bonded molecular complexes	2007 - MZU	
2	Mr Lalzabiaka	LED and Opamp based simple sun-photometer	2007 - MZU	
3	Mr Lalrintluanga Sailo	Ab initio studies of interactions in weakly-bonded binary systems	2008-MZU	
4	Mr. Jonthan Lalnunsiama	Study of dielectric data of an achiral W-shaped liquid crystal [44BPO6(OH)14]	2009-MZU	
5	Mr Dipendra Pradhan	Contact angle studies on some MEMS relevant substrates	2010 - MZU	
6	Mr. Dhanoj Gupta	FTIR studies of hydrogen bonds in alcohol-water systems and structure breaking by 1,4 dioxane	2010 - MZU	
7	Mr Lallawmkima	Surface studies of MEMS relevant Oxide substrates	2011 - MZU	
8	Mr Lalramnghaka	Simulations of molecular interactions in binary liquids	2011 - MZU	
9	Mr Laltanpuia	Dielectric studies of binary-liquid systems	2011 - MZU	
10	R Devi	Dielectric studies of PMN-PT material for different composition	2015- CUTN	M S R Rao of IIT Madras

S, No	Name	Title	Year/University	Co-Guide
11	Nikhila Dittakavi	Dielectric and Ferroelectric Studies of Lead Zirconate Titanate, $PbZr_xTi_{1-x}O_3$: $x = 0.40$ and 0.50 , Ceramics	2015- CUTN	M S R Rao of IIT Madras
12	M Vasuhi	Growth and Characterization of Freestanding Microcrystalline Diamond Films	2015- CUTN	M S R Rao, IIT Madras
13	Bharathi Kannamal	ZnO Based Electrospun Nanofibers Electrodes for Supercapacitor Applications.	2015- CUTN	Mohana Priya (CUTN)/ T S Natarajan (IIT Madras).
14	O. Sravya	Study of pH induced coagulation in Dairy Milk	2016-CUTN	
15	K Mahalakshmi	Wetting studies of 2D and 3D patterned surfaces	2016-CUTN	
16	Manoj Bhagat Sharma	Feasibility Studies of Nanoparticle Based Microwave Diathermy in Tissue Phantom	2016-CUTN	
17	Sabin Hashmi	FEM analysis of microwave diathermy	2018 -CUTN	
18	Angelina Shaji	Anomalies in contact angles of binary liquids	2018 -CUTN	
19	Arunav Das	Molecular Dynamics studies of water -THF binary system	2018 -CUTN	
20	A Karthikeyan	Cracks in Cauvery delta soils	2018 -CUTN	
21	Sivarenjani	Binding energy calculations of some biologically important interstellar sugar molecules	2020 -CUTN	
22	Gopika Krishnan	Recalculation and proof of deviations in the binding energies of water-Interstellar molecular complexes & Potential Energy Scans of Ar Dimer	2020 - CUTN	
23	Narasimhan B	Physico-chemical studies of nanoclay solutions	2020 -CUTN	
24	M Anju	Structure Elucidation of Cu(II) Mixed-Ligand Complexes using Density Functional Theory	2020-CUTN	V Rajendiran – Dept of Chem, CUTN
25	Rohan Charan Das	Variability classification of early and late active stars	2021-CUTN	Santosh Joshi, ARIES, Nainital
26	Devika P B	The growth of supermassive black holes in the core of galaxies.	2022- CUTN	SomakRaychoudhuri - IUCAA
27	Ajmal Rahman M K	Molecular Dynamics of Hydrogen Bonded alcohols	2023- CUTN	
28	Saishree K	Self-Assembly of hydrogen bonded binary systems	2023-CUTN	

Summer interns:

1. **Mr M K Madhujith** – IISER Thiruvananthapuram (23rd May to 30th June 2016) ,
2. **Ms. Surabhi Nambeesan**, Sri Venkateswara College, Delhi – July-Sept, 2020,
3. **Mr Athikan U**, IMSc (Mathematics) @022-23
4. **Mr Yokeshwaran IMSc (Physics) 2023** Summer

COURSES TAUGHT

1. Presented papers on teaching methodologies in physics at the national seminars conducted by Indian Association of Physics Teachers and Delhi University.
2. Presented a paper on pedagogical protocols for Physics labs in Delhi, 2015. Was awarded the best oral presentation.
3. Have the experience of teaching Physics to UG and PG students, inclusive students from of private engineering colleges, IIT-Madras and University of Hyderabad.

S.No.	Program	Paper	Institute	Remarks
1	Pre-PhD	Research Methodology	Mizoram University	
2	Pre-PhD	Soft Condensed Matter	Mizoram University	
3	MTech – IC Tech	RFIC Simulation lab	University of Hyderabad	As CSIR RA
4	MTech – IC Tech	MEMS lab	University of Hyderabad	As CSIR RA
5	MSc Physics	General Physics Lab	IIT Madras	As a Teaching Assistant
6	MSc Physics	Advanced Gen. Physics Lab	IIT Madras	As a Teaching Assistant
7	MSc Physics	Electronics Lab (Analog)	IIT Madras	As a Teaching Assistant
8	MSc Physics	Electronics Lab (Digital)	IIT Madras	As a Teaching Assistant
9	MSc Physics	Electromagnetic Theory	MZU	
10	MSc Physics	Classical Mechanics	MZU	
11	MSc Physics	Computer Programming and Environmental Science	MZU	
12	MSc Physics	Condensed Matter Physics	MZU	
13	MSc Physics	General physics Lab	MZU	
14	MSc Physics	Quantum Mechanics I	MZU	
15	MSc Physics	Experimental Techniques	MZU	
16	MSc Physics	Advanced Quantum Mechanics	MZU	
17	MSc Physics	Mathematical Physics	MZU	
18	BE	Applied Physics Theory	NITS	
19	BE	Physics Laboratory	NITS	
20	BE	Engineering Electromagnetics	NITS	
21	BE/BTech	Physics 1	SEC	
22	BE – CSE	Semiconductor Physics and Optoelectronics	SEC	
23	BE – ECE and EEE	Electron Devices	SEC	
24	BTech – IT	Electron Devices and Circuits	SEC	
25	B Tech	Physics 101Theory	IIT- Madras	As Teaching Assistant
26	B Tech	Lab	IIT Madras	As Teaching Assistant
27	B Tech	Applied Physics 101	MZU	
28	B Tech	Applied Physics 201	MZU	
29	IMSc Physics	Heat and Thermodynamics	CUTN	

S.No.	Program	Paper	Institute	Remarks
30	IMSc Physics	Electromagnetic Theory	CUTN	
31	IMSc Physics	Modern Physics	CUTN	
32	IMSc Physics	Heat and Thermodynamics Lab	CUTN	
33	IMSc Physics	Modern Physics Lab	CUTN	
34	IMSc Physics	Soft Condensed Matter	CUTN	Elective Course
35	IMSc Physics	Molecular Physics and Spectroscopy	CUTN	
36	IMSc Physics	Advanced Physics Laboratory	CUTN	
37	IMSc Physics	Computational Physics	CUTN	
38	IMSc Physics	Microwave Physics	CUTN	Elective Course
39	IMSc	Physics of Art	CUTN	General Elective for students of all departments
40	IMSc Physics	Physical Principles governing Astronomical Process	CUTN	Elective
41	IMSc Physics	Condensed Matter Physics 2	CUTN	
42	PhD	Interfacial Physics	CUTN	
43	MA Women's Studies	Women in STEM (2 Modules)	Bharatidasan University	Core PG

ACADEMIC ADMINISTRATION ACTIVITIES

S. No.	Position	Institution
1	Head of Department of Physics	Saveetha Engineering College, Chennai
2	Member, Board of studies for MSc Physics (BPGS)	Mizoram University
3	Member, Board of Undergraduate studies in Physics (BUGS)	Mizoram University
4	Member, Board of Post Graduate Studies	Mizoram University
5	Member, School Board, School of Physical Sciences	Mizoram University
6	Member, Board of studies B.Tech (IT &ECE)	Mizoram University
7	Member Grievance cell for women	Mizoram University
8	Member Editorial Board of Physical Science Journal	Mizoram University
9	Member, Mizoram University Monitoring Committee for Radiation resources	Mizoram University
10	Member departmental purchase committees	Mizoram University
11	Member departmental library committee	Mizoram University
12	Member departmental moderation committee	Mizoram University
13	Student Mentor	Mizoram University
14	Member, East Zone VC's meet Organizers	Mizoram University
15	Member, affiliated college inspection team	Mizoram University
16	Chairperson, CASH - GSCU	CUTN
17	Member, Academic Council	CUTN
18	Member, Executive Council	CUTN
19	Director, Internal Quality Assurance Cell (IQAC)	CUTN
20	Head of Department of Physics	CUTN
21	Member Student grievance committee	CUTN
22	Member Staff grievance committee	CUTN
23	Member Fee revision committee	CUTN
24	Member Hostel committee	CUTN
25	Member, Admission committee	CUTN
26	Member, Kindergarten feasibility committee	CUTN

S. No.	Position	Institution
27	Deputy Superintendent – CUCET 2014	CUTN
28	Member, Department Promotion Committee, Teaching	CUTN
29	Member, Department Promotion Committee, Non-Teaching,	CUTN
30	Observer for National Level Examination for medical and dental 2015	CBSE
31	Member, Department Research Committee	CUTN
32	Member, Department Purchase Committee	CUTN
33	Member, Department PhD Admission Committee	CUTN
34	Chairperson, Department PhD Admission committee	CUTN
35	Member, University admission committee	CUTN
36	Member, NAAC SSR preparation committee	CUTN
37	Member IQAC	CUTN
38	Member IQAC steering committee	CUTN
39	Member, Community Development Cell	CUTN
40	Coordinator, Global Initiative on Academic Network (GIAN)	CUTN
41	Nodal Officer, Best Practices in Central Universities	CUTN
42	Member, Board of Studies, School of Basic and Applied Sciences	CUTN
43	Member, Screening Committee – teaching	CUTN
44	Member, Screening Committee –non- teaching	CUTN
45	Gurukula Mentor	CUTN
46	Class Mentor	CUTN
47	Coordinator MOOCs-ICT	CUTN
48	University Nodal Officer UGC Swayam	CUTN
49	Coordinator, Heritage Club of CUTN	CUTN
50	Coordinator, University Social Responsibility Cell- KELIR	CUTN
51	VC's Nominee – Guest Faculty recruitment Department of English and Computer Science – 2018 Departments of Media and Communication and Law – 2019 Tourism and Hospitality - 2021	CUTN
52	Member, Admission committee (2019-20)	CUTN
53	University level Academic Journal expert committee	CUTN
54	KV VMC EC	CUTN/KV
55	Chairperson, Committee for formulating guidelines for granting TA to regular employees	CUTN
56	Nodal officer, sharing of good practices	CUTN
57	Member, BoS, Mathematics	CUTN
58	Member, BoS, Social Work	CUTN
59	Member, committee for ACs	CUTN
60	Member, BoS, Epidemiology	CUTN
61	Member, Committee for updating screening norms for faculty selection	CUTN
62	Coordinator, Orientation Program	CUTN
63	Admission Committee	CUTN
64	Community Development Cell	CUTN
65	Member, The Gender in Physics Working Group (GIPWG)	Indian Physics Association
66	Member, Board of PG Studies	Dept. Physics, Assam University
67	Member, Third Court of CUTN	01.03.2022-28-0.2.2025

CONFERENCES/SEMINARS/WORKSHOPS ORGANISED

A

1. **Organizing Member**- One-day state level seminar on Recent Advances in Radiation Physics – 15th April 2011 at Mizoram University, in collaboration with UGC-DAE CSR, Indore.
2. **Organizing Member**- National Workshop on FORTRAN programming, 22-26th November, 2011.
3. **Convener**-DST sponsored "National Workshop on Computational Physics" February 14B19 2011. Conducted in collaboration with CMSD, University of Hyderabad.
4. **Convener**-National Level Project Dissemination Seminar, MZU, Sponsored by Naval Research Board of India at Mizoram University, June 10th 2012.
5. **Convener** - One day Training Workshop on Physics Laboratory: Conduct and Innovation, March 7th 2015. CUTN.
6. **Convener** - National Conference on Current Trends in Soft Condensed Matter (NCCTSM)
7. Student workshops as **Chairperson** of CASH-GSCU -8 events over years
8. **Convener**- Women's day celebrations – 4 events
9. **Convener** - Gender sensitization workshop, 2 November 2015
10. **Convener** – Discussion forum on Working women and their problems -2-3-2016
11. National Science Day celebrations- **Convener/Member** – many years
12. **Convener** - 2nd Annual Convention of IAPT RC 13 18-19 January 2019
13. **Coordinator** – Along with others – Introductory Astronomy, 5-7 March 2019
14. **Coordinator** – along with others – IUCAA CUTN School on GR and Cosmology 4-10 January, 2020
15. **Coordinator** – Webinar on Droplets and their drying patterns – 29-30 June, 2020
16. **Coordinator** – Distinguished Lectures of Profs/Drs.. Ram Ramaswamy, Sonal Mansingh , P Ramasamy, S Vaidyasubrahmaniam and S M Ramasamy a part of CUTN decennial celebrations –between July 2020 and January 2021.
<https://www.youtube.com/playlist?list=PLi2snRKqWX9JKF5bmvinWnAmPE4fD9QuN>
17. **Coordinator** – VINN, the Astronomy and Astrophysics Club of CUTN- founded on 19th April 2021 <https://www.youtube.com/playlist?list=PLi2snRKqWX9Lg-4i-kvDYeAQExamfAcy>
18. **Coordinator** (With K Biju) Techno-Pedagogical Tools and Techniques, 5-9th July 2021.
<https://www.youtube.com/playlist?list=PLi2snRKqWX9IrcPmNINEO6dswudwVrtbP>
19. **Convener**, Cockroft-Walton Webinar 2022, COVID-19 Indian Physics Association- Institute of Physics, UK August 2nd and 3rd 2022. 2nd: <https://youtu.be/m0oqr8bI6NE> 3rd: <https://youtu.be/NVZ8bYKVO3A>

B. EVENTS ORGANISED FOR DISCUSSION FORUM FOR ONLINE TEACHING (DFOT)

With **Prof. Ram Ramaswamy**, IIT Delhi 2020-21

<https://www.youtube.com/playlist?list=PLi2snRKqWX9L02XiB9FuuZTh7Th0pR4Rf>

S.No	Type of Event	Title	Date	Speakers
1	Panel Discussion 1	How to Engage Students in Online Classes	23.08.20	Usha Raman, Sandeep Sen, Jayati Ghosh, Felix Bast.
2	Panel Discussion 2	Online Evaluations and Ways of Evaluating Online Classes	06.09.20	Qudsia Tahseen, Padma Sarangapani, Sameer Sapra, Angel Rathnabai
3	Hands-on Session 1	Google Forms and MOODLE	13.09.20	Bindu Bambah, Sameer Sapra
4	Panel Discussion 3	Online Teaching: The Role of	20.09.20	Suranjan Das, Venu Narayan, Kalpana Sarathy, R Srinivasan, VinithaMokdhagundam, Pankaj Chandra

S.No	Type of Event	Title	Date	Speakers
		Administration		
5	Hands-on Session 2	Examineersoftware	27.09.20	Ambar Jain
6	Panel Discussion 4	Challenges of Teaching Humanities Online	04.10.20	Shukla Sawant, Giridhar Rao, Manoj Majhi*, Meera Baidur, Mhd. Asim Siddiqui
7	Hands-on Session 3	Testmoz and Moodle	11.10.20	Surendranath Reddy, K Biju
8	Panel Discussion 5	Challenges of Teaching Mathematics and mathematical Physics Online	18.10.20	Kapil Paranjape, Debashish Ghoshal, Usha Devi, Kumaresan, Amber Habib.
9	Panel Discussion 6	Online Supervision of Scientific Research during the Pandemic	08.11.2020	R Chandrasekar , H T Lalremsanga , Anindita Bhadra. S Shankaranarayanan , Sobhan Sen
10	Panel Discussion 7	Virtual Labs and online Field work	22.11.2020	Aarushie Sharma, Aditya Viashya, Venkatesh Choppella B Chandan Kumar, A Shahin Sultana
11	Panel Discussion 8	The Art of Teaching Fine Arts Online	06.12.2020	Monika Bijlani, Rishi Barua, Anuradha Jonnalagadda , M Macha Chaoreikanba , V Premalatha , Prateek Chaudhuri
12	Panel Discussion 9	Online Teaching and Persons with Disabilities	03.01.2021	Mrutunjaya Mishra, Siddhartha Bhaskar, Raka Mandal and B P Mandal, Annavaram N, Beula Christy, Shilpi Bhattacharya.
13	Panel Discussion 10	The Stress of Online Education: Coping through Counselling	17.01.2021	Deepa Mohan, Pragya Khanna, Arvinder J Singh, Asis Roy, Gitanjali Kumar, D Bhagabati
14	Panel Discussion 11	Classes Online, Learning Offline: The Students Speak	31.01.2021	Abhinn Gupta, Akshay G, Aminuddin Ahmed, Anisha Dey, Anshu Kushwaha, Debodyuti Kar, Hivreen Kaur, Manoj N, Muddasir Ramzan, Rashmi Gottumukkala, Sangeeta Pakhare, SanketKasbale, SochingLuikham, Annavaram N, Asish Roy
15	Panel Discussion 12	Silver Linings: Advantages of Online Higher Education.	21.02.2021	Uma Kanjilal, Vimal Kishor, Raksha Singh,Saroj Nayak, Rishikaa Sanjeev, Sudhin Dutta
16	Panel Discussion 13	Has it been a year already? - Higher Education Online	04.04.2021	Jyotsna Jha, D Thammi Raju, Vikrant Yadav, K Prahalad, Sutirth Dey, Sujin Babu, ShubashreeDesikan

C. PROGRAM FOR ASPIRING WOMEN SCIENTISTS (PAWS)

A part of GIPWG of IPA. **Founder Convenor** and Facilitator along with **Deepa Chari** (HBCSE) and **Vandana Nanal** (TIFR)

S.No	Date	Host Institute	Participating Institutes	Facilitators
1	27 th November 2021	CUTN	CUTN	DC, VN, VM
2	18 th December 2021	IIT Ropar	IIT Ropar	DC, VN, VM
3	22 nd January 2022	Tezpur University	TU, Assam U, IIT Guwahati	DC, VN, VM and Moonmoon Devi
4	26 February 2022	St Bede College Shimla	St Bede College Shimla	DC, VN, VM
5	23 rd April 2022	IISER Trivandrum	IISER Trivandrum	VN, VM, Sarita Vig (IIST, TVM), Kavitha Jain (JNCASR), Deepshikha Jaiswal (IISER TVM)

D. NASI-CUTN OUTREACH PROGRAM ON DISPELLING SCIENTIFIC MYTHS AMONG SCHOOL CHILDREN

Team: V Madhurima (Coordinator); Kavya Bakka (Co-coordinator); K Biju, Sulthan Ibrahim, K Venkata Saravanan and V Varsha (Members)

S.No	Date	Place	Participants
1	23/3/2022	PunithaJayarakkiniMadha Aided Middle School, Pannaivilagam	44
2	26/3/2022	New Bharat Matriculation Higher Secondary School, Thiruvarur	102
3	25/8/2022	Government Higher Secondary School, Panangudi	73
4	13/9/2022	Government Higher Secondary School, Kodikkalpalayam	59
5	19/9/2022	Government Higher Secondary School, Anaikuppam	72
6	11/10/2022	V.S Boys Government Aided Higher Secondary school, Thiruvarur	51

E. NASI-CUTN OUTREACH PROGRAM ON HEALTH AND HYGEINE AMONG RURAL WOMEN

Team: V Madhurima (Coordinator); Kavya Bakka (Co-coordinator); V Varsha, S Gayathri, G Somna, S Divya (Members)

S.No	Date	Place	Number of Participants	Number
1	28-12-2021	CUTN, Physics Seminar Hall	CUTN House keeping staff	34
2	16-08-2022	Thiyagarajapuram Government School	Women of Thiagarajapuram Village - all age groups	19
3	11-09-2022	PunithaJayarakkiniMadha School	Women of Pannaivilagam village	17
4	24-09-2022	Perumpugazhur Government School	Women of Perumpugazhur	09
5	27-7-2022	CUTN, Physics Seminar Hall	House keeping staff of CUTN – Follow up	27
6	12-10-2022	Thiyagarajapuram Government School	Women of Thiagarajapuram Village - all age groups – follow up	17 houses
7	25-09-2022	PunithaJayarakkiniMadha School	Pannaivilagam – follow up	13
8	24-09-2022	Perumpugazhur	Women of Perumpugazhur	9

(AN)	Government School	
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F. Training Programs Organized Through MOOCS-ICT@CUTN

No	Topic	Faculty	Date
1	Methodologies of Technology Enabled Higher Education	Prof. V Madhurima Dr Biju K	5 July 2021
2	Moodle Advanced	Dr. A Chandrasekharan Dr Biju K	6 July 2021
3	Assessment Tools for Online Teaching Learning	Dr. K Venkata Saravanan (examineer) Dr. K Biju K (Testmoz)	7 July 2021
4	Blended Learning Strategies and Technology Tools	Dr Biju K Prof. V Madhurima	8 July 2021
5	Mobile Apps for Online Teaching Learning	Dr Biju K	9 July 2021

Others:

1. One-day Seminar on SWAYAM@CUTN, 14th February, 2018
2. Faculty Development Program on MOODLE and Online Education from 21st September to 29th September 2020.
3. Workshop on Techno-Pedagogical Tools and Techniques Organized by Team MOOCs ICT @ CUTN 5-9th July, 2021

POPULAR ARTICLES/NEWSPAPERS

1. **The Hindu** A parley with GurumurthyKasinathanonwhat challenges do online classes pose featuring the efforts of DFOT was published in The Hindu on 18.12.2020 and an associated podcast.
2. **The Telegraph** 01.12.2020 in the Telegraph. Learning in the time of Covid, with Ram Ramaswamy
3. DFOT's Panel Discussion -8 on the Art of Teaching Fine Arts online was covered by the University of Hyderabad's **Herald**. December 7th 2020
4. DFOT's Panel Discussion-8 was also covered in **VIBRATING STRINGS** e-Newsletter – Department of Music, CUTN Volume - 2, Nos. 3 & 4 (July 2020 – December 2020)
5. Quoted in Gifted Children Series- Parenting Gifted Children Part 3: Fulfilling Your Child's Educational Needs of **Parent Circle**, Vol. 12 , Issue 4, September 2022, pp 22-33

PERSONAL TRAINING RECEIVED

Certification in Online Pedagogy conducted by QASPIR (UK) with Association of Indian Universities

S.No.	Date	Title
1	April 1-3, 2020 (8 Hours)	Development as an online practitioner
2	April 15-17, 2020 (8 Hours)	Digital Leadership
3	May 6-8, 2020 (8 Hours)	Assessment and Evaluation for Online learning
4	May 13-15, 2020 (8 Hours)	Student engagement for online learning
5	May 20 – June 13 (4 hours)	Educational Technologies for online learning

Other Training

1. SERC Summer school on Liquid Crystals - May 1-28, 1994, Raman Research Institute, Bangalore

2. Short Term Training Program (STTP) on Scientific Instrumentation - Regional Sophisticated Instrumentation Centre - IIT Madras, December 1999.
3. STTP on Environmental Physics - Department of Physics - IIT Madras, December 11-16, 2000.
4. Refresher course on Semiconductor Physics and Opto-electronics Anna University December 2-6 2002.
5. Winter School on "Atmospheric Sciences" Conducted by ISRO-IITM between 21-31 December 2007 at IIT Madras.
6. UGC-SAMworkshop for Capacity building for women managers in higher education 7-11 January, 2013
7. Machine Drawing, Machining and 3D printing (WMDM3DP- 2018) Networking Resource Center, School of Physics, University of Hyderabad, 20th to 23rd August 2018.
8. Online Orientation Training Programme for Mentors from Higher Educational Institutions / Universities (UGC) conducted during 1 to 10 February, 2021, under the National Mentoring Mission of MoE and NITTR, Chennai.

Consultancy/Project Experience

1. Short term summer project (May-June 1992) in the Physics Department IIT Madras as a project associate in the project "Microwave photo conductivity of Zn_3P_2 and CdS semiconductors"
2. Junior research fellow in the Indo-US project "High resolution Fourier Transform Spectroscopy" under Center for Industrial Consultancy and Research (IC &SR) of IIT Madras from 10-07-93 to 15-08-94.
3. Senior Research Fellow in the Government of India Defence Research and Development Organisation (DRDO) Project "Development and characterisation of large size low and high dielectric constant copper clad PTFE/Glass/Ceramic type laminates for microwave applications" from 06-07-98 to 29-09-98.
4. Evaluation of Computer Based Tutorials (CBT) and Web Based Tutorials (WBT) prepared by many clients for M/s Trilux Technologies Singapore Ltd in the capacity of Secretary to the Institute of online studies (Centre of Academic Excellence) from December 2001 to February 2002.

Research Experience

1. PhD – Microwave and Materials Lab – Physics Department – IIT- Madras. Physico-chemical studies of hydrogen bonded binary polar liquids
2. Post-doctoral work at the University of Hyderabad in the School of Physics - 20th December 2003 to 28th February 2005. Dielectric studies of MEMS related substrates and liquids
3. Research Associate under the Universities with Potential for Excellence (UPE) Scheme of UoH in the Project titled "Low dimensional systems and nano structured materials" – 1-03-05 to 31-06-05. Dielectric studies of some MEMS related liquids confined to the surface of glass substrates. – Work published in Journal of Molecular Liquids
4. CSIR-RA at UoH from 1st August 2005 to 27th January 2007. Study of confined liquids for enabling MEMS technologies. This includes dielectric studies, development of new characterization techniques, use of upcoming technologies such as EBG structures, simulations of molecular interactions and the use of conventional spectroscopy as supporting evidence.