

Dr. A. DEEPAK

Associate Professor/ Associate Dean- International Affairs

Department of ECE,

Saveetha School of Engineering,

Saveetha Institute of Medical and Technical Sciences.

HIGHLIGHTS

- ✓ 8+ yrs. post Ph.D. experience (2016- 2024)
- ✓ Guiding 5 PhD students.
- ✓ Cumulative Impact Factor – 80 +
- ✓ Post-doctoral research in University of Plymouth on “Fabrication of graphene-based transistor for biomedical applications”, UK for a span of 2 months.
- ✓ Facilitate Memoranda of Understanding (MOU) between host university and internationally renowned institutes of excellence.
- ✓ Co-ordinate research/ academic visits of graduate and undergraduate students to carry out credit courses/ internships in abroad universities.
- ✓ Conduct periodic faculty development programme / guest lectures/ workshops/ credit courses by eminent professors from abroad universities to create awareness on higher education and research fellowships and to experience international teaching inside the host university.
- ✓ Facilitate the appointment of international examiners/ Adjunct faculties from abroad Universities and Industries.
- ✓ Research collaboration between faculties of host university and abroad university to apply for joint funding.

Educational Qualification

Post-doctoral research	University of Plymouth on “Fabrication of graphene-based transistor for biomedical applications”.
Ph.D. (Nano material-based sensors)	Saveetha Institute of Medical and Technical Sciences, Thesis title “Evaluation and Optimisation of Multiwalled Carbon Nanotubes and Graphene Mixed Polymer Based Piezoresistive Strain Sensors.
MTech (Nanotechnology)	Sathyabama University (Distinction)
B.E (Electronics and Communication Engineering)	Adhiyamaan College of Engineering, affiliated to Anna University (First class)

Professional Experience

Total Experience - 15+ years

Jun 2011- till date - Associate Professor, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences (**13 + Years**)

July 2007 - May 2009- Maintenance Engineer, Yes-labs India, Chennai. (**2 Years**)

Research and Professional Credentials

- a) Cumulative Impact Factor – 80
- b) 120 scientific publications in reputed journals.
- c) Over 50 technical paper presentations in national/international conferences.
- d) Major role in signing MOU with more than 40 foreign universities.
 - I. UK - Plymouth University, Manchester University, Coventry University, University of Nottingham, University of Surrey, Sheffield Hallam University.
 - II. USA - Northern Arizona University, St. Peters University.
 - III. Europe - La Sapienza University, Rome Business School, Italy, Riga Technical University, Latvia.
 - IV. Australia - Curtin University, ANIMT (Australian National Institute of Management and Technology).
 - V. Malaysia - UCSI university, Asia Pacific University, Swinburne University.
- e) Organized 100+ International expert talks
- f) Two Provisional Patent applied and co author of 2 book chapters.
- g) Actively involved in organizing several National and International Conferences/Workshops/Seminars/ Guest lectures.
- h) Guided several MTech and B.E. students' projects & Guiding 4 Ph.D. Scholars.
- i) Applied for several research project grants both in India and abroad.
- j) Collaboration with scientists and researchers in abroad and India.
- k) Ph.D. thesis was highly recommended by both external reviewers.
- l) Major contribution in engineering curriculum preparation for Saveetha school of engineering, SIMATS.
- m) Mentoring students to excel in both academic and co-curricular activities.
- n) Received several international and national awards.
- o) Guided students to participate in both national and international competition.

- p) Mentored several students to participate in Semester Abroad and credit transfer programmes.

Awards & Honors

1. Received **best poster presentation award** during star submit 2017 for one of my student projects on “Wearable Antennae”
2. Received **Young Faculty award-** VIFA 2016 for the contribution and achievement in the field of nanotechnology, organised by Venus International Foundation, 9th July 2016.
3. **Best use of Research award** received by my project student Mr. Mane Manikanda for his project work, which was guided, by me and Professor David Jenkins from Plymouth University during an open day competition held in Plymouth University, UK in April 2015.
4. Received **young scientist award** for the best oral presentation in Young Scientist convention 2011 conducted by Andhra Pradesh Academy of Sciences, in association with Acharya Nagarjuna University in October 2011.

Invitations/ Visits to Foreign and Indian Laboratories

1. Invited keynote talk in the international conference ICNAN'19 in VIT, Vellore on 29th November 2019.
2. Invited Talk on the topic “Ongoing Research Activities in SSE” at UCSI University, Malaysia in the International Education Fair during the month of March 2019
3. Invited Talk in Cambridge University, UK in the international conference “**Cambridge Summit 2018**” during January 2018.
4. Guest lecture on the topic “**Nano material-based sensors**” in University of Manchester during the month of January 2018

5. Guest lecture in University of Sussex on the topic “**Graphene and CNT based flexible sensors**” and “Nano materials for electronic applications” during the month of January 2018
6. Guest lecture in university of Nottingham on the topic “**Nano sensors and its applications**” during the month of January 2018
7. Invited Talk on “**Graphene reinforced polymer based Microstrip Patch antennae in communication**” during International Conference on Nano science and Nanotechnology (**ICNAN**)” in October 2016.
8. Visited **Zhuhai, China** for participating and presenting a paper in international conference **ICNMS-2015**, which took place in the month of January 2015.
9. Visited **Composite lab, R&DE, Engineers, DRDO, Dighi, Pune** in Dec 2012 and carried out research work for the preparation of Multi-walled Carbon Nanotube mixed PVDF based thin films.
10. Several Visits to **Indira Gandhi Center for Atomic Research (IGCAR)** regarding research collaboration and carried out research activities.
11. Joint collaborative work with Dr. David Jenkins from **Plymouth University, UK** and working on Collaborative Project titled “Ocular pressure measurement using graphene based thin films”.

Professional Society Membership

1. Member of Institution of Engineering and Technology (**MIET**)
 - Organized many events
 - Conducted research forum for the benefit of students.
 - Technical Debate competitions
2. International Association of Engineers (**IAE**)
3. International Association of Academicians and Researchers (**IAAR**)
4. Indian Academicians and Researchers Association (**IARA**)
5. American Translation Association (**ATA**)

Subject Expertise

- Nano Electronics
- Nano sensors
- Microprocessor
- Analog and Digital Communication
- Semiconductor Devices

Conferences/ Workshop/ Guest lectures Organised

Organized an Expert-talk titled “**Detection of Microplastics for filtration of Microplastics in domestic waste systems**” by Dr. David Jenkins, Professor at the University of Plymouth, UK, on 26th June 2020.

Organized an Expert-talk titled “**Autonomous and Intelligent Robots in Real world Domain Applications**” by Dr. Mario Gianni, professor at the University of Plymouth, UK, on 26th June 2020.

Organized an Expert-talk titled “**Where are we with 5G and 6G**” by Dr. Maziar Nekovee, professor at the University of Plymouth, UK, 26th June 2020.

Organized an Expert-talk titled “**4th International conference on Design, Analysis, Manufacturing & Simulation (ICDAMS 2020)**” by Dr. Weiping Wu, George Daniels Lectures at the University of London, UK, on 16 June 2020 and 19th June 2020.

Organized an Expert-talk titled “**4th International conference on Design, Analysis, Manufacturing & Simulation (ICDAMS 2020)**” by Prof. Gyorgy Szekely, Advanced Membranes and Porous Materials Center (AMPM), King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia, on 16 June 2020 and 19th June 2020.

Organized an Expert-talk titled “**Pedagogy and Community Engagement in Architectural Education**” by Ar. Chia Lin Lin, Head of School & Ar. Teoh Chee Keong, Head of Master of Architectural Program, School of Architecture and Built Environment, UCSI University, Malaysia, on 16th october-2020.

Organized an Expert-talk titled “**Creative Innovation and Digital Fabrication**” by Dr. Alejandro Veliz Reyes, Architect and lecturer, Digital Design & Fabrication at University of Plymouth, UK, on 17th september-2020.

Organized an Expert-talk titled **“Rip, Model & Learn”** By Prof. Carlo Bianchini, Department of History, Architectural Design and Restoration, La Sapienza, University of Rome, Italy, on 10th september-2020.

Organized an Expert-talk titled **“The New Landscape of the workplace: The design of modern office interiors to support well-being at work”** by Dr.Leanda French, Associate professor, centre of culture & creativity, MIMA Design – Programme Leader (spatial design), Teesside University, UK on 27th august-2020.

Organized an Expert-talk titled **“From Landfill to an Urban Ecology”** by Dr.Andy Humphreys, Acting Associate Head of School – Architecture, School of Art Design & Architecture, University of Plymouth, UK on 20th august-2020.

Organized an Expert-talk titled **“From Conceptual Orientation to a Praxis of Making”** by Dr.Robert Brown, Professor of Architecture, Master of Architecture Program Leader Founder, Urban Dialogues Research Network, University of Plymouth, UK, on 13th august-2020.

Organized an Expert-talk titled **“Information Communication Technologies to improve and disseminate Cultural Heritage”** by Mr.Tommaso Emler, Assistant Professor (Researcher) of Architecture and Industrial Design, Sapienza University of Rome , Italy, on 06th august-2020.

Organized an Expert-talk titled **“How VR is changing Engineering design: saving a virtual fortune”** by Dr Marc Holmes, Lead Research Officer, Virtual Reality department of Engineering, University of Swansea, UK, on 09th october-2020.

Organized an Expert-talk titled **“Come fly with me... in a plastic jet!”** By Dr. Fawad Inam, Professor of Mechanical Engineering & Head of Engineering & Computing, University of East London, UK on 25th september-2020.

Organized an Expert-talk titled **“Simulations of atom/ion behaviors in novel information (and energy) devices using first-principles and machine-learning approaches”** by Dr. Satoshi Watanabe, Special Advisor to the President and Professor, Graduate School of Engineering, The University of Tokyo, Japan on 25th september-2020.

Organized an Expert-talk titled **“Past, Present and Future of Engineering Simulations: Computational Fluid Dynamics”** by Dr. Salim M, Associate Professor in Engineering, Director of International Partnerships, Swansea University, Wales, United Kingdom on 11th September 2020.

Organized an Expert-talk titled **“The impact of artificial intelligence on different industries”** by Dr. Ang Chun Kit, Dean, Faculty of Engineering & Built Environment, UCSI University, Malaysia on 09th September 2020.

Organized an Expert-talk titled “**Connecting the Pixels: A Journey into the Digital Realm**” by Dr. Alan Ong Tee Chuan, Digital Media Head of Department, ICAD, UCSI University, Malaysia on 04th September 2020.

Organized an Expert-talk titled “**The Future of Portable Electronic Devices & its New Power Sources**” by Dr. V. Pandiyarasan, Faculty, Electronics & Communication Engineering, Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Chennai on 28th August 2020.

Organized an Expert-talk titled “**Robotics & Industry 4.0**” by Dr. Hudyjaya Siswoyo Jo, Senior Lecturer, Faculty of Engineering, Computing and Science, Swinburne University of Sarawak, Malaysia on 21th August 2020.

Organized an Expert-talk titled “**Biomedical Science Teaching and Research in Plymouth: Role of Marine Environments in Human Health**” by Dr. Mathew Upton, Professor & Dr. Philip Warburton, Lecturer, Medical Microbiology, University of Plymouth, UK on 14th August 2020.

Organized an Expert-talk titled “**Skills and Behaviors that make Entrepreneurs Successful**” by Mr. Chandan Ohri, President & Academic Director, AGI Education, Managing Director at Duco Consultancy, New Zealand on 07th August 2020.

Organized an Expert-talk titled “**Data Science & Business Analytics at the University of Plymouth**” by Dr. Luciana Dalla Valle, Associate Professor, Data Science & Statistics School of Engineering, Computing & Mathematics, University of Plymouth, UK on 31th July 2020.

Organized an Expert-talk titled “**Marine Autonomous Systems: Research & Applications**” by Dr. Sanjay Sharma, Associate Professor (Reader) in Intelligent Autonomous Control Systems, School of Engineering, Computing & Mathematics, University of Plymouth, UK on 24th July 2020.

Organized an Expert-talk titled “**Atomic Force Microscope**” by Dr. Sang – Joon Cho, Vice President & Director, R&D App Tech Center, Park Systems Corp, Suwon, Korea on 17th July 2020.

Organized an Expert-talk titled “**Internet of Profiling - Traffic, Users and Applications**” by Dr. Bogdan Gita, Associate Professor, School of Engineering Computing and Mathematics, University of Plymouth, UK on 08th July 2020.

Organized an Expert-talk titled “**High Tech FAB for Advanced Industries**” by Mr. Ashok kumar, BIM, VDC, IDD Manager, Exyte, Singapore on 30th June 2020.

Organized an Expert-talk titled “**Functional and 2D Materials for Next Generation of Electronics**” by Dr. Weiping Wu, George Daniels Lecture, School of Mathematics, Computer Science and Engineering, Department of Electrical and Electronic Engineering, University of London, UK on 26th June 2020.

Organized an Expert-talk titled “**Types of Fume Hoods and other Lab Safety Equipment**” by Mr. Roy Rosario, Director, Dynaflo Pvt. Ltd, Sydney, Australia on 19th June 2020.

Organized an Expert-talk titled “**Supercapacitors & Energy Storage Devices**” by Dr. Rajendrakumar Sharma, Chairman & MD – Spel Technologies Pvt. Ltd, Pune and MD & CTO – Surya Powerfarad Energies Limited, Pune, and Partner – Centre of Excellence on Rechargeable Battery Technology, Pune on 12th June 2020.

Organized an Expert-talk titled “**Nanodevices and Nanomaterials for Early Onset Detection of Disease Biomarkers in Blood and Disease Prevention in Water**” by Dr. David Jenkins, Professor, University of Plymouth, UK on 05th June 2020.

Organized an Expert-talk titled “**Spacecraft Attitude Motion Planning Using Gradient-Based Optimization**” by Dr. Fabio Celani, School of Aerospace Engineering of Sapienza University of Rome on 26th June 2020.

Organized an Expert-talk titled “**Fibre distribution and the process-property dilemma**” by John Summerscales CEng, CEnv, CSci, Professor of Composites Engineering, School of Engineering, Mathematics and Computing, University of Plymouth, England on 30.04.2020.

Organised hands on workshop titled “**Nano Materials For Sensing Applications**” which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2020.

Organised a guest lecture titled “**Jobs of the Future: Emerging Trends in AI**” by resource Person Dr. Natalia Beloff, Professor, Department of Informatics from University of Sussex, UK which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2020.

Organised a guest lecture titled “**Research and Academic Collaboration opportunities at Swinburne University, Australia**” by resource Person Dr. Gavin Lambert, Director, Iverson Health Innovation Research Institute from Swinburne University, Australia which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2020.

Organised a guest lecture titled “**Guest lecture about higher studies**” by resource Person Ms. Colleen Flynnthapalia from Clarkson University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in September 2019.

Organised a guest lecture titled “**International seminar on biotechnology**” by resource Person Dr. Lynda from University of Sheffield, UK which was held in

Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2019.

Organised a guest lecture titled “**Current trends in Engineering research and development in New Zealand**” by resource Person Prof. Nihalkularatna

From Waikato University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2019.

Organised a guest lecture titled “**An Introduction to Cloud Computing and Big Data**” by resource Person Dr. Matthew James Forshaw from Newcastle University, UK which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2019.

Organised a Faculty Development Programme titled “**Teaching Learning Process**” by resource Person Prof Brett Kirk, Prof Tony Lucey, Prof Vishnu Pareek, Dr Chris Rawson, Professor Abhijit Mukherjee from Curtin University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in November 2018.

Organised a guest lecture titled “**Study opportunities in University of Plymouth**” by resource Person Ms. Wilma Paul from University of Plymouth which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in October 2018.

Organised a guest lecture titled “**Study opportunities in Saint Peters University**” by resource Person Ms. Kristy from Saint Peters University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in September 2018.

Organised a guest lecture titled “**Study opportunities in Full Sail University**” by resource Person **Ms. Anu Kalhan from Full sail University** which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in July 2018.

Organised a guest lecture titled “**Ontology Development through Concept Map and Text Analytics: The Case of Automotive Safety Ontology**” by resource Person Dr. Vijayan Sugumaran from Oakland University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in July 2018.

Organised a guest lecture titled “**current research in biotechnology and explore opportunities for food security and disease prevention**” by resource Person Ms. Sue cosstle from Australian National University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in April 2018.

Organised a guest lecture titled “Technology and Innovation for Development” by resource Person **Dr Saurabh Arora from University of Sussex** which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in April 2018.

Organised a guest lecture titled “**Inertial Tracking and Data Recording for Fatal Road Traffic Collisions & Faculty discussion on Assessment method and question paper settings**” by resource Person Dr. David Jenkins from University of Plymouth which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in April 2018.

Organised a guest lecture titled “**Demand side response and renewable energy**” by resource Person Prof. Neil Hewitt from Ulster university which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in Feb 2018.

Organised a guest lecture titled “**What’s in the name**” by resource Person Dr. Turi King from University of Leicester which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in Feb 2018.

Organised a guest lecture titled “**Premier League Football and the Connected Crowd: Mixing Business & Research for Brighton and Hove Albion**” by resource Person Mr. Leo Cutting, Prof Ian Wake man from University of sussex which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in November 2017.

Organised a guest lecture titled “**Master Degree Courses Student Exchange Programme Research Collaboration**” by resource Person Dr. Ivana Pekarova from Technical University of Liberec which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in October 2017.

Organised a guest lecture titled “**Reasearch Collaboration and Student Exchange programme**” by resource Person Dr.Gaurang Vakil from University of Nottingham which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in August 2017.

Organised a guest lecture titled “**Reasearch Collaboration and Student Exchange programme**” by resource Person Dr. Bruce Quare from University of Nottingham which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in August 2017.

Organised a workshop titled “**Workshop on Relation between science and Research**” by resource Person Mr. Ravi Sankaran from Madras University which

was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in July 2017.

Organised a workshop titled “**Workshop on Paper Writing**” by resource Person Dr.Vijayan Sugumaran from Oakland University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in July 2017.

Organised a guest lecture titled “**Student Exchange Programme and Faculty Exchange Programme**” by resource Person Ms. Neringa Narbutiene from Kaunas University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in May 2017.

Organised a workshop titled “**Workshop on good paper Writing**” by resource Person Dr.David Jenkins from University of Plymouth which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in May 2017.

Organised a guest lecture titled “**Research Collaboration and Student Exchange programme**” by resource person Ms. Helen Foster from University of Nottingham which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in April 2017.

Organised a guest lecture titled “**Student Exchange Programme and Faculty Exchange Programme**” by resource Person Ms. Maneeta Sahmey from University of Nottingham which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in March 2017.

Organised a workshop titled “**Workshop on Nanotechnology**” by resource Person Mr. Niraj Kumar Sahu from VIT which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in March 2017.

Organised a workshop titled “**Online Workshop for Paper Writing**” by resource Person Dr.Vijayan Sugumaran from Oakland University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in March 2017.

Organised a guest lecture titled “**Computing economics and democracy**” by resource Person Dr.David Collins from Keela University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2017.

Organised a guest lecture titled “**Artificial life meets Artificial Intelligence**” by Resource Person Dr.Simson Lynch from Teesside University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2017.

Organised a guest lecture titled “**Personalization & Culture in E-Learning**” by Resource Person Dr.Craig Steward from Coventry University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2017.

Organised a guest lecture titled “**Computer Game Engineering and Applied Research**” by Resource person Dr.Gray Ushaw from Newcastle University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2017.

Organised a guest lecture titled “**Data mining...a paradox**” by Resource Person Dr. Stephen Gill from Heriot Watt University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in February 2017.

Organised a guest lecture titled “**Delay Tolorent Networking**” by Resource Person Dr.Ian Wakeman from University of Sussex which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**Security Protocol Analysis**” by Resource Person Dr.David M. Williams from University of Surrey which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**Big data: New trends and applications**” by Resource Person Dr. Morio Kolberg from University of Stirling which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**Networking on Security**” by Resource Person Dr. Bogdan Ghita from University of Plymouth which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**A Flavor of Data Analytics**” by Resource Person Dr. Frans Coenen from University of Liverpool which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017

Organised a guest lecture titled “**Internet of Things**” by Resource Person Prof. Christopher David MC Dermott from Robert Gordon University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**Industry 4.0**” by Resource Person Jennifer Muskett from Southampton Solent University which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Organised a guest lecture titled “**Cyber Security**” aspect soft cryptography from a classical and quantum perspective” by Resource Person Dr.William Joseph Spring from University of Hertfordshire which was held in Saveetha School of Engineering, Saveetha Institute of medical and Technical Sciences in January 2017.

Conducted a two-day national workshop on “**Design and Analysis of Antenna using ansys hfss**” held in Saveetha School of Engineering, Saveetha University on 3rd and 4th March 2015.

Conducted a two-day national workshop on “**Custom IC design flow using cadence EDA tool suite**” held in Saveetha School of Engineering, Saveetha University On 23rd& 24th February 2015.

Organized a National Level Workshop titled “**Modeling and Simulation of Micro and Nano Electronic Devices**” which was held in Saveetha School of Engineering, Saveetha University during march 2014.

Coordinator for a National level workshop titled “**Workshop on Nano Science and Technology**” held in IITM, Chennai on February 2014.

Coordinated a workshop On “**Nano Sensors And Nano Electronics**” by Professor Vijay.K. Varadhan, from University of Arkansas which was held in Saveetha School of Engineering, Saveetha University on 2013

LIST OF PUBLICATIONS OF A. DEEPAK (Annexure -4)

Journal Publications

[1] Bagane, P., Kandula, S.R., Saxena, A., ...Deepak, A., Rao, S.G., Intelligent System for Prediction of Potentially Hazardous Nearest Earth Objects Using Machine Learning, *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(1s), pp. 71–80

[2] Bani Ahmad, A.Y.A., William, P., Uike, D., ...Deepak, A., Shrivastava, A., Framework for Sustainable Energy Management using Smart Grid Panels Integrated with Machine Learning and IOT based Approach. *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(2s), pp. 581–590

[3] Deepak, A., Sharma, K., Naik, G.R., ...Poonguzhali, S., Singh, D.P., Image Processing based Robotic Car for Agricultural Ploughing using Machine Learning Approach, *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(2s), pp. 718–724

[4] Sivarajeswari, S., Hublikar, S.N., Kumar, Y., ...Deepak, A., Oliva, M., Multiple Level Inverter Scheme for Improved Power Quality of Renewable Energy Solar Panel, *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(1s), pp. 98–105

[5] Ajalkar, D., Kumar, A.C., Sharma, A., ...Deepak, A., Lakshmi, T.R.V. An Smart Intelligence Performance Analysis Using ANN Classifiers For Soil Color Texture Identification, *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(1s), pp. 18–26

[6] Shilpa, V.J., Sharma, R.R., Kumar, R., ...Deepak, A., Ray, D.K., A Intelligent Hybrid Bio-Inspired (Raft Consensus-Foraging Hum-mingbird) for Distributed Storage System of Academic Information *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(1s), pp. 10–17

[7] Kadam, A.K., Krishna, K.H., Varshney, N., ...Hegde, S.K., Patil, Deepak A, V.H., Design of Software Reliability Growth Model for Improving Accuracy in the Software Development Life Cycle (SDLC) *International Journal of Intelligent Systems and Applications in Engineering*, 2024, 12(1s), pp. 38–50

[8] Deepak, A., Chavan, A.S., Bodhankar, A., ...Nimmalarathi, Vanathi, A., Advancing Air Quality Prediction in Specific Cities Using Machine Learning, *International Journal of Intelligent Systems and Applications in Engineering*, 2023, 11(11s), pp. 309–317

[9] Renganathan, B., Rao, S.K., Kamath, M.S., **Deepak, A.**, Ganesan, A.R., Sensing performance optimization by refining the temperature and humidity of clad engraved optical fiber sensor in glucose solution concentration, *Measurement: Journal of the International Measurement Confederation*, 2023, 207,

[10] Sree Lakshmi, P., Deepak, A., Muthuvel, S.K., Amarnatha Sarma, C Design and Analysis of Stepped Impedance Feed Elliptical Patch Antenna Smart Innovation, *Systems and Technologies*, 2023, 334, pp. 63–70 Show abstract View at Publisher Related documents
0 Citations

[11] Renganathan, B., Rao, S.K., Ganesan, A.R., Deepak, A., Optical Spectrum Analyzer Integrated Fiber optic Modified nanocrystalline annealed Al₂O₃ cladding for improved evanescent-wave toxic gas detection *Optics Communications*, 2022, 525,

[12] Renganathan, B., Krishna Rao, S., Kamath, M.S., ...Ganesan, A.R., Deepak, A., Performance evaluation of Ce doped ZnO clad modified fiber optic non-enzymatic glucose sensor at varying ambient temperatures for blood sugar detection applications, *Microchemical Journal*, 2022, 183, 107890

[13] Renganathan, B., Rao, S.K., Ganesan, A.R., Deepak, A., Kannapiran, N, Investigation of the room temperature gas-detecting potential of CeO₂-doped ZnO at different ratios using clad-modified fiber optic gas sensor, *Journal of Materials Science: Materials in Electronics*, 2022, 33(31), pp. 23974–23985

[14] Abourehab, M.A.S., Baisakhiya, S., Aggarwal, A., ...Ansari, M.J., Pramanik, S, Chondroitin sulfate-based composites: a tour d'horizon of their biomedical applications, *Journal of Materials Chemistry B*, 2022, 10(44), pp. 9125–9178

[15] Renganathan, B., Krishna Rao, S., Ganesan, A.R., Deepak, A., Investigating the gas sensing potential in CeO₂ Fiber Optic Sensor via trivalent Gadolinium ion substitution at room temperature, *Materials Letters*, 2022, 325, 132766

[16] Kumar, R.R., Babu, J.M., Saleh, B., ...Buradi, A., Ketema, A. Investigation of friction welding parameters of AISI 304L/Ti-6AL-4V joints *Materials Research Express*, 2022, 9(10), 106515

[17] Abourehab, M.A.S., Pramanik, S., Abdelgawad, M.A., ...Ansari, M.J., Deepak, A., Recent Advances of Chitosan Formulations in Biomedical Applications, International Journal of Molecular Sciences, 2022, 23(18), 10975

[18] Abourehab, M.A.S., Rajendran, R.R., Singh, A., ...Amaral, L.S., Deepak, A., Alginate as a Promising Biopolymer in Drug Delivery and Wound Healing: A Review of the State-of-the-Art
International Journal of Molecular Sciences, 2022, 23(16), 9035

[19] Ansari, M.J., Rajendran, R.R., Mohanto, S., ...Yasir, M., Pramanik, S Poly(N-isopropylacrylamide)-Based Hydrogels for Biomedical Applications: A Review of the State-of-the-Art

[20] Pandya, D.J., Singh, A., Vinothkumar, T., ...Deepak, A., Khan, I. Sensorless Firefly Algorithm for Speed Control of BLDC Motors
Proceedings of 5th International Conference on Contemporary Computing and Informatics, IC3I 2022, 2022, pp. 1538–1543

[21] Neeraja, B., Salman, H.M., Reddy, C.V.K., ...Deepak, A., Kumar, P. Neural Network based Solar Panel Tracking for Maximum Power Yield
Proceedings of 5th International Conference on Contemporary Computing and Informatics, IC3I 2022, 2022, pp. 1088–1093

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Highlights of the Ph.D Thesis

- Optimization of MWCNT-PVDF films and Graphene-PVDF films were done in order to get maximum sensitivity of strain sensor
- Non- Destructive measurement of strain using Raman analysis were carried out using nano composite thin films.
- Raman mapping (Non-contact method) were carried out to measure localized strain
- Real time defect analysis and prediction techniques using calibration graph were carried out.

- MWCNT-PVDF film based electric fan regulator was designed and applied for patent.
- Graphene-PVDF film based robotic arm movement was implemented.
- Dielectric analysis using Broadband Dielectric spectrometer was carried out to understand the percolation threshold and dispersion of fillers in matrix. Permittivity and capacitance were also measured.
- Comparative analysis with various other strain sensing techniques like Digital Image Correlation, extensometer and Wheatstone bridge circuit were carried out.
- Both material research and applied research were reported.
- Multidisciplinary and its applications can be extended up to 4 to 5 domains.

Potential Research Opportunities Based on Ph.D research work

The potential research work which can be carried out based on extension of my Ph.D research work are as follows.

- Fabrication and testing of Graphene –Polymer based antennae
- Effect of functionalization of graphene on various properties of the developed thin films such as conductivity, dielectric constant, dispersion of filler over matrix, Capacitance and permittivity.
- Effect of addition of metal oxides and other polymers in order to explore the electrical properties of the film.
- Graphene reinforced nano composites films for structural health monitoring in civil application.
- Graphene based vibrational and pressure sensors
- Graphene and metal oxide-based gas sensors
- Graphene reinforced nano composite films for Ocular pressure measurement.
- Nano material-based energy harvesting Automated Irrigational System.

Books (Co-Author)

- **INTRODUCTION TO NANO ELECTRONICS-** M.M. INDIA MEDICAL SERVICE PRIVATE LIMITED.CHENNAI (2014)

- **ANALOG ELECTRONICS CIRCUITS -1-** M.M. INDIA MEDICAL SERVICE PRIVATE LIMITED.CHENNAI (2014)

Book Chapters

1. Advanced Nano material for Industrial Application (**ISBN: 978-93-82563-34-1**)

2. Industrial Applications of nano structured materials (**ISBN: 978-93-85436-93-2**)

Patents

- **Two Provisional patent with complete specifications filled till date**

Title of Patent	Patent Reference Number
Multi-walled Carbon Nano tube and Graphene Based Polymer Nano-composite Film as Electric Fan Regulator	4311/CHE/2015
Title: Graphene based Gallium Doped Field Effect Transistor	5181/CHE/2013

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Reference 1

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