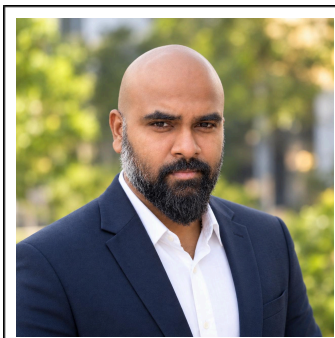


Faculty Profile



**Dr T Aravind M.E., MBA., Ph.D.,
Professor**

PROFESSIONAL LINKS:

- Scopus ID: [57200696349](#)
- Google Scholar ID: [h-index 6 & i10 index 4](#)
- Orchid id: <https://orcid.org/0000-0003-1478-6182>
- Researcher id: [U-2198-2017](#)
- Anna University Faculty ID: 2122070
- AICTE Faculty ID: 1- 4639441339
- Anna University Supervisor ID: 3540032
- LinkedIn: [ARAVIND THANGAVEL](#)

PROFESSIONAL BACKGROUND:

Teaching Experience till date: 15 years 4 months

- Professor, Saveetha Engineering College, Chennai, June 2023 to present.
- Associate Professor, Saveetha Engineering College, Chennai, February 2020 to May 2023.
- Assistant Professor (SG), Saveetha Engineering College, Chennai, June 2016 to January 2020.
- Assistant Professor (OG), Saveetha Engineering College, Chennai, June 2011 to May 2016.

AREA OF SPECIALIZATION:

- MEMS
- Nanoelectronics
- Wireless Communication
- Satellite Communication
- Electronic Devices

Ph.Ds GUIDING:

- Full Time Scholars: 1
- Part Time Scholars : 3

PATENTS PUBLISHED/GRANTED:

- Paper Microfluidic and lateral flow immunoassay technique based kit for detection of TSH, 17/03/2023, M. Deepa Lakshmi, Dr.S.Praveen Kumar, Dr.T.Aravind, G Dinesh Ram, S Ramya, D Lingaraja, T K Srinivasan.
- A Novel fabrication approach in porous silicon based biosensing device for cholesterol detection, 04/02/2022, Dr.S.Praveen Kumar, D Lingaraja, S Ramya, G Dinesh Ram, Dr.T.Aravind.
- Force Controlled Electrothermally Activated Micro-Gripper for Bio-Manipulation, 28/01/2022, Dr.S.Praveen Kumar, Dr.T.Aravind, S Ramya, G Dinesh Ram, D Lingaraja.
- Enhanced efficiency and guaranteed quality for 5g network using Cognitive-FEMTO techniques, 31/12/2021, Dr.S.Selvi, Mr.V.Devaraj, Dr.T.Aravind, Mrs.T.Archana, Mrs. A.Hema Malini, Dr.C.Senthil Kumar, Mrs.S.Pushpa, Mrs. S.V.Priya, Dr.S.Deepa, Dr.K.Mithra.
- Fabrication of Paper Based Microfluidic Device for Lipid Profile analysis, 24/12/2021, Dr.S.Praveen Kumar, Ms. K.Anitha, Dr.T.Aravind, Dr.S.Sritha Nath, Ms.T.Merlin Inbamalar.
- A Novel fabrication approach of testosterone meter kit for hormone level detection, 24/12/2021, Dr.S.Praveen Kumar, G Dinesh Ram, S Ramya, D Lingaraja, Dr.T.Aravind.
- Microfluidic blood cell separation and detection kit for point of care diagnosis, 10/12/2021, Dr.S.Praveen Kumar, Dr.T.Aravind, S Ramya, G Dinesh Ram, D Lingaraja.

COURSES CERTIFIED:

- Completed Domain Certification in Data Science Oct 2025.
- Completed QIP in Data Science at IIIT UNA in Jan 2025.
- Completed IUCEE International Engineering Educators Program - Phase III – Spring 2020.
- Business English certificate (BEC) Vantage – Level B2.
- Completed Informal Learning Programming (ILP) in Student Counselling Certification in Coimbatore Psychology Foundation in 2014.
- Completed QIP short term course on Cyber security for next generation technologies: challenges and solutions, 2022.
- Completed Accreditation and Outcome Based Learning in NPTEL 2022.
- Completed Introduction to Cybersecurity in CISCO NETACAD Sep 2021.
- Completed online course on Nanotechnology and Nanosensors authorized by Technion – Israel Institute of Technology through COURSERA in May 2021.
- Completed online course on Introduction to solar cells authorized by Technical University of Denmark through COURSERA in May 2020.
- Completed Network Essentials from CISCO NETACAD Oct 2019.
- Attended training on Hands on Training in MEMS Bio Chip in IIT-B in Sep 2013.

ACHIEVEMENTS AND AWARDS:

- Selected one among the 10 teams for the final of SUKSHMA SAMRACHANA-21 MEMS INNOVATION CHALLENGE conducted at national level in the year 2021 - 2022.
- Best Paper Award in International Conference on Advanced Technology in Engineering and Management (ICATEM 2019) MDIS Singapore Feb 2019.
- Recipient, Best Teacher Award, consecutively from 2013 till 2018.
- Recipient, Teacher of the Year Award, 2017 - 2018.
- Recipient, Best Student Bronze medal for academic excellence 2011.

SPECIAL SESSIONS DELIVERED:

- Presented a Lecture in the topic BioMEMS Design using COMSOL in Two Weeks Online Course on BioMEMS – July 2020.
- Presented a Lecture in topic Application of Nanotechnology in Virtual Faculty Development Programme on Nanotechnology- July 2020.
- Presented a Lecture in MEMS Design in FDP - Recent Communication Tools & its Applications-May 2020.
- Presented a Lecture in the topic MEMS GRIPPER DESIGN in National Level Workshop HATOM SEPTEMBER 2015.
- Presented a Lecture in the topic Introduction to MEMS in National Level Workshop HATOM SEPTEMBER 2014.
- Handled a session in topic Design of MEMS Pressure sensor in National Level Workshop using COMSOL MULTIPHYSICS MEMI FEB 2014.
- Presented a Lecture in the topic MEMS Packaging in National Level Workshop HATOM SEPTEMBER 2013.
- Handled a session in the topic MEMS CANTILEVER Design in National Level Workshop using COMSOL MULTIPHYSICS MEMI MARCH 2012.

JOURNALS/CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Energy Harvesters based on MEMS for IoT Applications, G Dinesh Ram, **T Aravind**, CV Tharun Reddy, Bijjam Sunil Kumar, Chittamuru Sailokesh, 2023 Third International Conference on Artificial Intelligence and Smart Energy (ICAIS), [10.1109/ICAIS56108.2023.10073733](https://doi.org/10.1109/ICAIS56108.2023.10073733)
- Design of Solar Energy Harvester for Smart Home Application, D Lingaraja, S Praveen Kumar, **T Aravind**, TK Srinivasan, G Dinesh Ram, S Ramya, 2023 5th International Conference on Smart Systems and Inventive Technology (ICSSIT), [10.1109/ICSSIT55814.2023.10060954](https://doi.org/10.1109/ICSSIT55814.2023.10060954)
- Green synthesis of SnO₂ nanoparticles using Chrysopogon Zizaniodes root extract to degrade the methylene blue dye, D Lingaraja, S Praveen Kumar, T Aravind, TK Srinivasan, S Ramya, G Dinesh Ram, Materials Today: Proceedings, [10.1016/j.matpr.2023.01.029](https://doi.org/10.1016/j.matpr.2023.01.029) SNIP: 0.774

- Green synthesis of Ag-doped ZnO using Nelumbo nucifera flower extract for antibacterial activity, S Ramya, S Praveen Kumar, TK Srinivasan, T Aravind, D Lingaraja, G Dinesh Ram, G Bhuvaneshwari, Materials Today: Proceedings, [10.1016/j.matpr.2023.01.028](#) SNIP: 0.774
- Green synthesis of silver nanoparticles using Chrysopogon zizanioides root extract and their antibacterial activities, G Dinesh Ram, S Praveen Kumar, TK Srinivasan, T Aravind, S Ramya, D Lingaraja, G Bhuvaneshwari, Materials Today: Proceedings, [10.1016/j.matpr.2023.01.026](#) SNIP: 0.774
- Generation of electric energy by utilizing piezoelectric effect, K Anitha, T Aravind, S Praveen Kumar, Materials Today: Proceedings, [10.1016/j.matpr.2023.01.027](#) SNIP: 0.774
- Collecting Dataset for Machine Learning Using IoT: Based Electricity Consumption in Residential and Commercial Area, D Lingaraja, T Aravind, S Praveen Kumar, Bollavaram Vamsidharreddy, Mannur Rohith, Thopugunta Pavan Kumar, 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), [10.1109/ICECONF57129.2023.10084277](#)
- Simple Piezoelectric based MEMS Energy Harvester Design and Simulation, G Dinesh Ram, T Aravind, S Praveen Kumar, U Hariharan, G Jeyachandran, G Goutham, 2022 International Conference on Automation, Computing and Renewable Systems (ICACRS), [10.1109/ICACRS55517.2022.10029083](#)
- Design of electrothermally actuated micromirror for low power switching applications, S Ramya, S Praveen Kumar, T Aravind, TK Srinivasan, G Dinesh Ram, D Lingaraja, 2022 6th International Conference on Electronics, Communication and Aerospace Technology, [10.1109/ICECA55336.2022.10009457](#)
- Design and analysis of MEMS based actuator using Shape Memory Alloy, D Lingaraja, S Praveen Kumar, T Aravind, TK Srinivasan, S Ramya, G Dinesh Ram, 2022 3rd International Conference on Smart Electronics and Communication (ICOSEC), [10.1109/ICOSEC54921.2022.9952092](#)
- Analysis of Piezoelectric Based MEMS Micromirror for Optical Communication, G Dinesh Ram, S Praveen Kumar, TK Srinivasan, T Aravind, S Ramya, D Lingaraja, 2022 3rd International Conference on Smart Electronics and Communication (ICOSEC), [10.1109/ICOSEC54921.2022.9951948](#)
- MEMS based Chip for Blood Cell Sorting using Microfluidic Channel, S Ramya, S Praveen Kumar, TK Srinivasan, T Aravind, G Dinesh Ram, D Lingaraja, 2022 3rd International Conference on Smart Electronics and Communication (ICOSEC), [10.1109/ICOSEC54921.2022.9952048](#)
- Microfluidic analysis of micro needle array for drug delivery applications, D Lingaraja, S Praveen Kumar, T Aravind, TK Srinivasan, S Ramya, G Dinesh Ram, 2022 International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER), [10.1109/DISCOVER55800.2022.9974694](#)

- Study of progress on nanocrystalline cellulose and natural fiber reinforcement biocomposites, T Aravind, Mohd Ashraf, Rajesh AS, N Ahalya, Mahavir Singh Rawat, B Uma, Rajneesh Sharma, Ram Subbiah, SisayKetema Sida, Journal of Nanomaterials, [10.1155/2022/6519480](#) SNIP: 0.882
- Design and Analysis of MEMS Bimaterial Cantilever using Piezoelectric Layer for Solar Energy Conversion, D Lingaraja, S Praveen Kumar, T Aravind, TK Srinivasan, S Ramya, G Dinesh Ram, 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC), [10.1109/ICESC54411.2022.9885292](#)
- Air Damping Effects on Perforated RF MEMS Switches, S Ramya, S Praveen Kumar, T Aravind, TK Srinivasan, D Lingaraja, G Dinesh Ram, 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC), [10.1109/ICESC54411.2022.9885366](#)
- Simulation and investigation of dual axis MEMS scanning mirror for LiDAR applications, G Dinesh Ram, S Praveen Kumar, TK Srinivasan, T Aravind, S Ramya, D Lingaraja, 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC), [10.1109/ICESC54411.2022.9885546](#)
- Thermal Inplane Microgripper for Handling Micro-Objects, S Ramya, S Praveen Kumar, T Aravind, TK Srinivasan, G Dinesh Ram, D Lingaraja, 2022 7th International Conference on Communication and Electronics Systems (ICCES), [10.1109/ICCES54183.2022.9835816](#)
- Design of Chevron Electrothermal Actuator for High Force Defense Applications, S Ramya, S Praveen Kumar, T Aravind, U Rasan, G Dinesh Ram, D Lingaraja, 2023 7th International Conference on Computing Methodologies and Communication (ICCMC), [10.1109/ICCMC56507.2023.10083925](#)
- Design and Analysis of Stress Distribution In V-Beam Electrothermal Actuator, G. Dinesh Ram, S. Praveen Kumar, T. Aravind, S. Ramya, D. Lingaraja, T.K. Srinivasan, 2022 8th international conference on smart structures and systems (ICSSS), APR, 2022. [10.1109/ICSSS54381.2022.9782244](#)
- Microfluidic Circulating Tumour cell sorter using Deterministic Lateral Displacement, S. Ramya, D. Lingaraja, G. Dinesh Ram, S. Praveen Kumar, T. Aravind, 2021 IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER), 19-20 Nov. 2021 [10.1109/DISCOVER52564.2021.9663577](#)
- Analysis of Material Profile for Polymer-Based Mechanical Microgripper for Thin Plate Holding; T. Aravind, S. Praveen Kumar, G. Dinesh Ram, and D. Lingaraja; Signal and Image Processing Techniques for the Development of Intelligent Healthcare Systems, 2020, ISBN 978-981-15-6140-5, 103-118. [10.1007/978-981-15-6141-2_6](#)
- Design and Simulation of MEMS Based Electrothermal Micro Mirror for Optical Switching; K. Anitha, P. Mahiz Mathi, T. Aravind, S. Ramya, TEST

Engineering & Management, Volume 82, 2978 – 2983, January-February 2020,

- Design and material analysis for prototyping of four arm mechanical microgripper with self-locking and anti-slipping capability; Aravind Thangavel, Ramesh Rengaswamy, Praveen Kumar Sukumar, Microsystem Technologies (2019) 25:851-860, ISSN 0946-7076, Volume 5, Number 3. [10.1007/s00542-018-4025-9\(0V\)](#) SNIP: 0.865
- Modelling of Chevron electrothermal actuator and its performance analysis; Aravind Thangavel, Ramesh Rengaswamy, Praveen Kumar Sukumar, Ramya Sekar, Microsystem Technologies (2018) 24:1767–1774, ISSN 0946-7076, Volume 24, Number 4. [10.1007/s00542-018-3791-8\(](#) SNIP: 0.865
- Comparative Study of Different Materials on Performance of Chevron Shaped Bent-Beam Thermal Actuator, T. Aravind, R. Ramesh, S. Praveen Kumar, and S. Ramya, Springer Nature Singapore Pte Ltd. 2018, I. Zelinka et al. (Eds.): ICSCS 2018, CCIS 837, pp. 743–751, 2018. [10.1007/978-981-13-1936-5_76](#)
- Selective adsorption of low density lipoprotein from blood using porous silicon, S.Praveen Kumar, T.Aravind, Advanced material letters, 2018, 9(2), 142-147 [10.5185/AMLETT.2018.1952](#) SNIP: 0.800
- MEMS based Force Sensor for structural mechanics Interpretation in Micro devices; S.Praveen Kumar, T.Aravind, Karman Frances Raj George Maria Selvam, PrudhviraajKuncha, MahizMathi.P; Journal of chemical and Pharmaceutical sciences; ICIEEE'17; ISSN 0974-2115; Pages 39-42; 2017. SNIP: 0.310
- Cipher Text Policy Attribute Based Encryption for Data Retrieval in Disruption Tolerant Networks; N.Sasikala, T.Aravind; Journal of chemical and Pharmaceutical sciences; ICIEEE'17; ISSN 0974-2115; Pages 73-77; 2017. SNIP: 0.310
- Dynamic Power Reduction using Razor Flip-Flop with Embedded Transition Inversion; S.Suganya, T.Aravind, D.Sivakumar; Journal of chemical and Pharmaceutical sciences; ICIEEE'17; ISSN 0974-2115; Pages 106-109; 2017. SNIP: 0.310
- Design of MEMS based Microneedle for Drug Administration; K.Meena, T.Aravind, A.R.Kalaiarasi; Journal of chemical and Pharmaceutical sciences; ICIEEE'17; ISSN 0974-2115; Pages 36-38; 2017. SNIP: 0.310
- A Vibration based Piezoelectric energy harvester; G.Arokia Nerling Rasoni, T.Aravind, Jasmine J.Nainita; Journal of chemical and Pharmaceutical sciences; ICIEEE'17; ISSN 0974-2115; Pages 27-30; 2017. SNIP: 0.310
- Porous Based immuno sensor for detection of LDL molecules from blood serum using array of cantilever beam; S.Praveen Kumar, R.Ramesh, T.Aravind; Journal of Advances in Chemistry; Volume 13, ISSN 2321-807X; Pages 6333-6340; 2017.
- Polymer Based Bio-Filter; S.Praveen Kumar, R.Ramesh, T.Aravind; Journal of Advances in Chemistry, Volume 13; ISSN 2321-807X ; Pages 6328-6332; 2017.

- Silicon Based Bio-Filter for bio-molecule separation; S.Praveen Kumar, R.Ramesh, T.Aravind; Biomedical Research, Volume 28; ISSN 0970-938X ; Pages 4181-4186; 2017. SNIP: 0.372
- Study on Different Meander Structured Microchannel: A Biofilter; S.Praveen Kumar, R.Ramesh, T.Aravind; Biomedical Research, Volume 28; ISSN 0970-938X ; Pages 3688-3692; 2017. SNIP: 0.372
- Analysis of different size Microchannel through particle tracing for Biomolecule Separation; S.Praveen Kumar, Dr.R.Ramesh, T.Aravind, Journal of Computational and Theoretical Nanoscience 14(7); pg 3351-3355; July 2017. SNIP: 0.343
- Design and Simulation of a novel polymer based 4 arms Mechanical Microgripper for Manipulation; T.Aravind, R.Ramesh, S.Praveen Kumar; World Applied Sciences Journal 34(10), pg.no 1318-1325 , ISSN 1818-4952; December 2016;
- Comparison of Different Materials on Performance of Chevron Shaped Electrothermal Microgripper; T.Aravind, Dr.R.Ramesh, S.Ramya, S.Praveen Kumar and Dr.A.R.Kalaiaarasi; International Journal of Printing, Packaging Allied Science; Volume 4, Pages 2560-2566; ISSN 2320-4387; December 2016.
- Design and simulation of Piezoelectric Based MEMS Force Sensor; S.Praveen Kumar, R.Ramesh, T.Aravind; International Journal of Printing, Packaging Allied Science, Volume 4, Pages 2598-2604; ISSN 2320-4387 December 2016.
- Isolation and Detection of Low Density Lipoprotein Using Porous Silicon Based Array of Cantilever; S.Praveen Kumar, R.Ramesh, T.Aravind; International Journal of Printing, Packaging Allied Science, Volume 4, Pages 2488-2496; ISSN 2320-4387 December 2016.
- Dynamic Power Reduction for VLSI Circuit using Delay Insertion Methodology; Suganya.S, Aravind.T, Sivakumar.D; International Journal of Applied Engineering Research; Volume 10, Pages 16475-16482; 0973-4562, 2015.
- Design and Simulation Analyses of MEMS Gripper with Aluminium and Nickel Alloys; Praveen Kumar.S, Aravind.T, Karman Frances Raj.G; ARPN Journal of Engineering and Applied Sciences; Volume 10, Pages 4610-4613; June 2015; ISSN 1819-6608. SNIP: 1.248
- Design and Simulation Study Analyses of Flux based LOC Regulator Cum Mixer for Drug Delivery System; Praveen Kumar.S, Aravind.T, Karman Frances Raj.G International Journal of Applied Engineering Research, Research India Publication; Volume 10, 2015; Pages 13813-13822; ISSN 0973-4562. SNIP: 1.248
- Design and Simulation Analyses of a Cantilever based Energy Harvester with Hinge Suspension for Enhanced DOF; Praveen Kumar.S, Aravind.T, Karman Frances Raj.G; Australian Journal of Basic and Applied Sciences, Volume 9(16), pages 19-24; 2015; ISSN 1991-8178. SNIP: 0.519
- Design and Simulation Study of Polymer Coated Micro Filter for Detection of Airborne Particles; Praveen Kumar.S, Aravind.T, Karman Frances Raj.G,

Kishore Kumar; 2014 International Conference on Smart Structures and Systems; Pages 134-137; IEEE Xplore Digital Library.

- Design of Diaphragm based Sensor for Detection of Arsenic; Praveen kumar.S, Aravind.T, Karman Frances Raj.G; International Journal of Science & Engineering Research; Volume 4, Issue 10, October 2013.ISSN 2229-5518.
- Design of Pressure Sensor with Phase Change Liquids for Temperature Detection; Praveen Kumar.S, Aravind.T, Karman Frances Raj.G, Prashanth.P; International Journal of Electronics and Communication Engineering Research (IJCER); Volume 1, Issue 3, August 2013.
- A Novel Thermopneumatic based Micropump and Microvalve using Phase Change Liquid; Aravind.T, Praveen Kumar.S, Karman Frances Raj.G, Prashanth.P; 2013 IEEE International Conference on Smart Structures and Systems; Pages 66-69; IEEE Xplore Digital Library.
- Design of MEMS Gyroscope to detect and monitor Parkinson's disease - A Study; AdhaviShri.A.S, Praveen Kumar.S, Aravind.T; 2013 IEEE International Conference on Smart Structures and Systems; Pages 77-81; IEEE Xplore Digital Library.
- Fault Scanning and Repairing in Processor based System using Dynamic Reconfiguration; GowthamRaj.G, Kannan.B, Aravind.T; 2013 IEEE International Conference on Smart Structures and Systems; Pages 120-124; IEEE Xplore Digital Library.
- Modeling of Wireless Energy Harvester; Praveenkumar.S, Aravind.T, Prithvirajan.U; Programmable Device Circuits and Systems; Volume 4, No 10 (2012).

PROFESSIONAL MEMBERSHIPS:

- Indian Society for Technical Education (**ISTE**).
- Institute of Electrical and Electronics Engineers (**IEEE**).
- Institute of Electronics and Telecommunication Engineers (**IETE**).