



**Dr. S. KAVITHA, M.E., Ph.D.  
Assistant Professor (S.G) - EEE**

**HIGHLIGHTS:**

- Number of Journal Publications: 39
- H-Index: 07
- Project Funding Received: 02
- Patents Published: 3
- Patents Granted: --NA--

**PROFESSIONAL LINKS:**

- Scopus ID: 57526836900
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=56872847900>
- **ORCID:** 0000-0002-0043-9035
- Google Scholar ID: [S. Kavitha - Google Scholar](#)
- Anna University Faculty ID: 2122093
- AICTE Faculty ID: 1-472607984
- LinkedIn: <https://www.linkedin.com/in/kavitha-vijayanand-5660387a/>

**PROFESSIONAL BACKGROUND:**

- Teaching Experience till date: 24 years
- Industrial Experience: --NA--

**INVITED TALKS / OUTREACH PROGRAMMES**

Delivered lecture on Optimization of GMR Sensor Location on Induction Motor for Online Rotor Fault Prediction – INTI International University, Malaysia (2022).

**AREA OF SPECIALIZATION:**

- Electrical Machines and Controllers
- Renewable Energy Systems
- Converters

**SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:**

<b>Title of Project</b>	<b>Agency</b>	<b>Status</b>
Drainbot-IOT Powered Smart Trash Collector	TNSCST	10000/- 2024 Sanctioned
Smart Drainage Cleaning and Monitoring System For Solid	TNSCST	10000/- 2024 Applied

Waste Products Using IOT		
Revolutionising Medication Management- Smart Pill Boxes with Virtual Assistants	Naan Mudhalvan - Niral Thiruvizha	15000/- 2023 Submitted
Field Oriented Control (FOC) based BLDC/Stepper Motor Drive Electronics	ISRO	2,00000- 2023 Submitted
Smart shoes for Visually Challenged People	TNSCST	7,500/- 2022- Sanctioned
Design And Development of An Intelligent Oxygen Delivery System For Acute Pulmonary Diseases	IEEE HAC/ SIGHT (Humanitarian Activities Committee & Special Interest Group on Humanitarian Technology )	1,75,000-2021 -Submitted
Tracking of clean energy – Accelerating to access Green energy	MNRE seminar grant	1,00,000 -2018- Submitted

#### **PATENTS PUBLISHED/GRANTED:**

- Filed patent on 18/02/2023 with application reference number:202341011107 A and published on 17/03/2023 on “A Novel IOT-Based Multi Head Food Extrusion Utility System”
- Filed patent on 26/07/2023 with application reference number: 202341050317 A and published on 01/09/2023 on “Rechargeable wireless sensor networks with multiple sinks”.
- Filed Patent on 05/02/2024 with application Reference Number 202441015750A and Published On 15/03.2024 on “Futuristic Rotating Machine For Wind Power Generation”

#### **COURSES CERTIFIED:**

- Electric Vehicle Powertrain Engineering (Advanced) -DIYguru
- Machine Learning A-Z: Hands on Python and R in in Datata Science
- Python for Data Science in NPTEL Swayam.

#### **JOURNAL PUBLICATIONS**

##### **SCI & WoS:**

1. **S. Kavitha, B. Chinthamani, John De Britto C, B. Suresh Chander Kapali, Machine learning based robust control for DFIG based wind energy conversion systems, Sustainable Computing: Informatics and Systems, Volume 48,2025,101236, ISSN 2210-5379, <https://doi.org/10.1016/j.suscom.2025.101236>. (Scopus Indexed. SCI, Anna university Annexure)**

2. **Kavitha, S.**, Pavithra, Y., Mohamed Yahya, J. (2026). Design and Development of a Gripper Arm for Borewell Rescue Using SolidWorks. In: Rathore, V.S., Tavares, J.M.R.S., Hanumanthappa, M., Surendiran, B. (eds) Universal Threats in Expert Applications and Solutions. UNI-TEAS 2025. Lecture Notes in Networks and Systems, vol 1450. Springer, Singapore. [https://doi.org/10.1007/978-981-96-7289-9\\_37](https://doi.org/10.1007/978-981-96-7289-9_37) (Scopus Indexed.)
3. Arasa Kumar, R., John De Britto, C., Raja, E., Ohmshankar, S., **Kavitha, S.** (2026). Design, Prototyping, and Analysis of an IoT-Enabled MIMO Antenna for Future Wireless Communication Systems. In: Rathore, V.S., Piuri, V., Babo, R., Karthik, S. (eds) Universal Threats in Expert Applications and Solutions. UNI-TEAS 2025. Lecture Notes in Networks and Systems, vol 1452. Springer, Singapore. [https://doi.org/10.1007/978-981-96-7292-9\\_41](https://doi.org/10.1007/978-981-96-7292-9_41) (Scopus Indexed)
4. **Kavitha, S.**, Deepika, B., Balaji, B. (2025). Intelligent Drainage Cleaning System with Real-Time Sensing and Automated Waste Disposal. In: Hassanien, A.E., Anand, S., Jaiswal, A., Kumar, P. (eds) Innovative Computing and Communications. ICICC 2025. Lecture Notes in Networks and Systems, vol 1434. Springer, Singapore. [https://doi.org/10.1007/978-981-96-7523-4\\_36](https://doi.org/10.1007/978-981-96-7523-4_36). (Scopus Indexed)
5. **Kavitha, S.**, Chinthamani, B., & Sailaja, K. I. (2025). Development and characterization of highly conductive hybrid Moringa oleifera husk biocarbon and grape pulp cobalt oxide polyvinyl alcohol composites for microwave shielding. Biomass Conversion and Biorefinery, 15(5), 8125-8134. (Scopus Indexed)
6. Rajalingam, S., Kanagamalliga, S., Priya, K. S., Priya, R. K., & **Kavitha, S.** (2023, April). Development of an Interactive Road Safety System Using a Smart Helmet for Bike Users to Avoid Bike Accidents. In *International Conference on Artificial Intelligence and Digital Twin Technology* (pp. 43-54). Cham: Springer Nature Switzerland. (Scopus Indexed)
7. Mettilda, M., Chrisona, S., Anand, S., & **Kavitha, S.** (2025). Design and implementation of a standalone photovoltaic system with zeta converter for efficient energy conversion and voltage regulation. In *Recent Innovations in Sciences and Humanities* (pp. 139-146). CRC Press. (Scopus Indexed)
8. Sinthia, P., Rajalakshmi, S., Chinthamani, B., **Kavitha, S.**, & Malathi, M. (2024, January). Non-invasive Monitoring of Patients Diagnosed with Varicose Veins and Implementing Automated Treatment. In *International Conference on Universal Threats in Expert Applications and Solutions* (pp. 63-71). Singapore: Springer Nature Singapore. (Scopus Indexed)
9. Sinthia, P., Malathi, M., Kanchana, K., Chinthamani, B., **Kavitha, S.**, & Karpaga Priya, R. (2024, January). RFID-Based COVID-19 Prevention System. In *International Conference on Universal Threats in Expert Applications and Solutions* (pp. 21-29). Singapore: Springer Nature Singapore. (Scopus Indexed)
10. **Kavitha, S.**, Yukesh, B., & Loshini, S. (2024, March). Innovative Autonomous Disinfection Robotics—A Comprehensive Solution for Pandemic Control. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 313-321). Singapore: Springer Nature Singapore. (Scopus Indexed)

11. **Kavitha, S.**, Vignesh, G., & Sabanayagam. (2024, March). Revolutionizing Urban Mobility: A Comprehensive Exploration of IoT-Based Smart Parking Systems. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 243-251). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
12. Chintamani, B., **Kavitha, S.**, Karpaga Priya, R., Sinthia, P., Malathi, M., & Kanchana, K. (2024, March). Calibrator for High-Temperature Dry Block Using PID Controller. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 377-384). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
13. Kanchana, K., Chintamani, B., **Kavitha, S.**, Priya, R. K., Sinthia, P., & Malathi, M. (2024, March). Robotics Arm Controller with Fuel Cell-Based Stepper Motor Drive Using Double-Ended Forward Converter. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 71-82). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
14. Karpaga Priya, R., Sinthia, P., Malathi, M., Kanchana, K., Chinthamani, B., & **Kavitha, S.** (2024, March). Elimination of Harmonic Interference by Adopting a Shunt Active Filter Solution. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 43-57). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
15. **Kavitha, S.**, Chinthamani, B., & Sailaja, K. I. (2024). Development and characterization of highly conductive hybrid *Moringa oleifera* husk biocarbon and grape pulp cobalt oxide polyvinyl alcohol composites for microwave shielding. *Biomass Conversion and Biorefinery*, 1-10. . **(Scopus Indexed. SCI, Anna university Annexure)**
16. Malathi, M., Armash, S. M., **Kavitha, S.**, Chinthamani, B., & Sinthia, P. (2024, January). Building Robust Fraud Detection Model for Insurance Claims Using SMOTE. In *International Conference on Universal Threats in Expert Applications and Solutions* (pp. 273-284). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
17. **Kavitha, S.**, Karpaga Priya, R., Sinthia, P., Malathi, M., Kanchana, K., & Chinthamani, B. (2024, January). Solar Panel Tracking with Battery-Assisted and Battery Charging Modes. In *International Conference on Universal Threats in Expert Applications and Solutions* (pp. 55-65). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
18. Kanchana, K., **Kavitha, S.**, Anoop, K. J., & Chinthamani, B. (2024). Enhancing skin cancer classification using efficient net b0-b7 through convolutional neural networks and transfer learning with patient-specific data. *Asian Pacific Journal of Cancer Prevention: APJCP*, 25(5), 1795.
19. **Kavitha, S.**, Kanchana, K., & Venkatesan, G. (2023). Long Range (LoRa) and Alert Network System for Forest Fire Prediction. *Asian Journal of Water, Environment and Pollution*, 20(6), 61-66. **(Scopus Indexed)**
20. **Kavitha, S.**, Malathi, M., Sinthia, P., Priya, R. K., & Suresh Kumar, K. (2023, February). Early Identification of Plant Diseases by Image Processing Using Integrated Development Environment. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 139-152). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
21. Chinthamani, B., **Kavitha, S.**, Bhuvaneswari, N. S., & Shanker, N. R. (2023). Induction Motor Torque Prediction Using Dual Function Radar Received Polarised Signals and

Machine Learning Algorithm. *Journal of Electrical Engineering & Technology*, 1-9. **(Scopus Indexed, SCI, Anna university Annexure)**

- 22. Karpaga Priya, R., **S. Kavitha**, M. Malathi, P. Sinthia, and K. Suresh Kumar. "Single-Phase Bi-Directional AC/DC Converters for Fast DC Bus Voltage Controller." In *International Conference on Emerging Trends in Expert Applications & Security*, pp. 33-44. Singapore: Springer Nature Singapore, 2023. **(Scopus Indexed)**
- 23. Joly, M., Pradeep, A., & **Kavitha, S.** (2023). Intelligent Voice Controlled Wheel Chair for Disabled People. *Cardiometry*, (26), 532-536.
- 24. Joly, M., **Kavitha, S.**, & Pradeep, A. (2023). Smart monitoring, management and control of Blood bank Management System using IoT. *Cardiometry*, (26), 537-543.
- 25. Malathi, M., Sinthia, P., Priya, R. K., **Kavitha, S.**, & Kumar, K. S. (2023, February). Design of Automatic Clearance System for Emergency Transport and Abused Vehicle Recognition. In *International Conference on Emerging Trends in Expert Applications & Security* (pp. 109-117). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
- 26. Sinthia, P., Karpaga Priya, R., **Kavitha, S.**, Malathi, M., & Suresh Kumar, K. (2023, February). IoT-Based Smart Pill Box and Voice Alert System. In *International Conference on Emerging Trends in Expert Applications & Security* (pp. 129-138). Singapore: Springer Nature Singapore. **(Scopus Indexed)**.
- 27. **Kavitha, S.**, Malathi, M., Sinthia, P., Priya, R. K., & Suresh Kumar, K. (2023, February). Early Identification of Plant Diseases by Image Processing Using Integrated Development Environment. In *International Conference On Emerging Trends In Expert Applications & Security* (pp. 139-152). Singapore: Springer Nature Singapore. **(Scopus Indexed)**
- 28. Immanuel, T. B., Rathnavel, P., Arikesh, A., Steena, T. B., **Kavitha, S.**, & Ezhilarasi, G. (2022, April). Performance Analysis of Single Stage Inverter Employing Fuzzy Controller. In *2022 8th International Conference on Smart Structures and Systems (ICSSS)* (pp. 01-05). IEEE. **(Scopus Indexed)**
- 29. **Kavitha, S.**, Bhuvaneswari, N. S., Senthilkumar, R., & Shanker, N. R. (2022). Magnetoresistance sensor-based rotor fault detection in induction motor using non-decimated wavelet and streaming data. *Automatika: časopis za automatiku, mjerjenje, elektroniku, računarstvo i komunikacije*, 63(3), 525-541. **(Scopus Indexed, SCI, Anna University Annexure)**
- 30. **Kavitha, S.**, Mahalakshmi, R., & Chinthamani, B. (2020). Improvement of Power Quality in Grid Connected Photovoltaic and Wind Energy System. *Journal of Green Engineering*, 10, 4405-4414. **(Scopus Indexed)**
- 31. Lakshmi, D., Ezhilarasi, G., **Kavitha, S.**, Pushpa, S., & Chinthamani, B. (2022, April). Investigation of Distribution Static Compensator Formitigation of Nonlinear Loads. In *2022 8th International Conference on Smart Structures and Systems (ICSSS)* (pp. 1-7). IEEE. **(Scopus Indexed)**
- 32. Saju, N., Porselvi, T., Raj, M. G., Pradip, C., & **Kavitha, S.** (2022, November). Wind Energy Fed SEPIC Converter with PID Controller for High Performance. In *2022 Sixth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)* (pp. 370-373). IEEE. **(Scopus Indexed)**

33. T. Thenmozhi, M. V. S. Devi and **S. Kavitha**, "Improvement of Power Quality Using PV with UPQC," 2022 8th International Conference on Smart Structures and Systems (ICSSS), Chennai, India, 2022, pp. 1-6, doi: 10.1109/ICSSS54381.2022.9782210. **(Scopus Indexed)**
34. **Kavitha, S.**, Ponmalar, S. J., & Chinthamani, B. "FPGA Implementation Of Race Control Algorithm For Full Bridge PRCP Converter".
35. **Kavitha, S.**, Chinthamani, B., & Ponmalar, S. J. (2012). Fuzzy based control using lab view for temperature process. International Journal of Advanced Computer Research, 2(4),
36. Kannan, R., Ponmalar, S. J., & **Kavitha, S.** Intelligent Driver Assist & Fuel Consumption System For Road Transport Using Ubiquitous RFID
37. **S.Kavitha**, B.Chinthamamni, S.Joshibha Ponmalar FPGA implementation of race control Algorithm for full bridge PRCP Converter, International Journal of Research in Engineering and Technology, Nov-2012 ISSN(online):2319-1163, (print): 2321-7308.
38. Kannan, R., R.Radika ,Ponmalar, S. J., & **Kavitha, S.** Implementation of Advanced Energy Management Systems, International Journal of Engineering Research And Management ,Dec-2014, ISSN: 2349-2058
39. **Kavitha.S** Kannan, R., Ponmalar, S. J., & Kavitha, S Autonomous Ground Vehicle Navigation and Tracking System, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.23 (2015).

#### **SPECIAL SESSIONS DELIVERED:**

- Session Chair in ICETESS 2025 at JCREC, Jaipur
- Session Chair in UNI-TEAS 2025 at SKUC, Jaipur
- Delivered Lecture as Speaker on the topic “Optimization of GMR sensor Location on Induction Motor for Online Rotor Fault Prediction” at INTI International University, Malaysia 2022.
- Delivered a session on Topic Environmental Sustainability and Impacts of EVs on Indian Ecosystem in IEI Sponsored All India Workshop on “ An overview of the present and future outlook of Electric Vehicles in India: Approaches and Perspectives” on 05.11.2024 & 06.11.2024 At Saveetha Engineering College
- Delivered a Session on topic Selecting a Right Journal for Publication : Metrics and Credibility with Case Study on Five Days FDP on Innovative Research Practices IPR : A real Case Studies -Based Approach at GKM college of Engineering and Technology.

#### **CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:**

##### **Organized:**

- Overall Drestein 2024 Project Display competition on 2024.
- Workshop on Flight into the Future: Exploring Drone Technology 2.0” on 8.9.2024
- Workshop on “Trends on Sustainability and Lighting Design in Modern Industry” on 18th October 2024.
- 5 Days Faculty Development Program on “Sustainable Lighting Design in Modern Industry Using DIALux Evo”.
- Seminar on “Navigating Your Future: Unleashing Potential in the Path to Career Success”

- Two Days Workshop On “IOT Prototyping and Development: Hands on Training Workshop”
- One Day Workshop on “EV battery Assembling”
- Seminar on Impacts of EV And EV Charging Station In Power Grid.
- Seminar on “Recent Trends in Industrial Automation”.

**Attended:**

- Presented Paper at International Conference on Power Electronics and Renewable Energy Systems At Rajalakshmi Engineering College on title " Design and Development of a Solar-Powered Remote Controlled Water Waste Collector for Efficient Aquatic Pollution Management "on 20.12.24
- Presented A paper Titled Innovative Autonomous Disinfection Robotics – A Comprehensive Solution for Pandemic Control in 3rd International Conference on Emerging Trends in Expert Applications and Security" Jaipur, 15-17 March 2024
- Present Paper titled Revolutionizing Urban Mobility: A Comprehensive Exploration of IoT-Based Smart Parking Systems in 3rd International Conference on Emerging Trends in Expert Applications and Security" Jaipur during 15-17 March 2024.
- One Week Atal FDP on “Next Generation Green Energy powered Electric Vehicle and Renewable Energy Integration using Solar Micro Grid at HOLY MARY INSTITUTE OF TECHNOLOGY & SCIENCE from 09/12/2024 to 14/12/2024”.
- One-week AICTE ATAL FDP on “Electric Vehicles: Technological Innovations and Market Trends”, 02/12/2024 to 07/12/2024 organised by Saveetha Engineering College.
- Presented a paper at the “International Conference on Power, Energy, Control and Transmission Systems “on 8<sup>th</sup> & 9<sup>th</sup> October 2024.
- “Being Industry ready with system modelling skills” 01.06.2024, Organised by MathWorks, India.
- Six days IFDP “Harnessing AI for Healthcare Excellence “, 24.06.2024-29.06.2024 organized by SRM IST Ramapuram.
- Five days FDP on “Exploring the Frontiers of Artificial Intelligence: Theory, Application & Ethics”, 8th - 12th July, 224 organised by Prathyusha Engineering College.
- Innovation and Intellectual Property Rights (IPR) Awareness Program/s, July 01 – Aug 05, 2023 organized by CSIR – IMMT.
- 7 days Online International FDP on “ Latest trend and techniques in software engineering: An Industry Perspective” from 20.01.2024 to 27.01.2024 organized by Christ University, Bangalore.
- Six Days online FDP on “Recent Advancements in materials, manufacturing and technology” from 30-10-2023 to 04-11-2023 organized by Swarnandhra College of Engineering & Technology.
- One – week online Professional Development Programme on “Recent advances and challenges in Electric Vehicles” from 23-10-2023 to 28-10-2023 organized by IEEE PES chapter in association with IEEE VCE SB, Vardhaman College of Engineering, Shamshabad.

- Webinar on “Carbon capture utilization and storage” on 19-10-2023 organized by SRM Madurai college of engineering & technology.
- DST Sponsored Three weeks online “Women Entrepreneurship Development Programme” on 14-08-2023 to 04-09-2023 organized by Rajalakshmi Institute of Technology.
- STTP on “ Applied Machine Learning : Unleashing its Real world Potential” from 31-07-2-23 to 04-08-2023 organized by Siksha ‘o’Anusandhan.
- Online symposium on optimization of GMR. Sensor location on Induction motor for online rotor fault prediction at INTI International university on 31-05-2-23.
- Webinar on” Scientific Social Responsibility for Women” organized by MIT campus , Anna University on 31-03-2023.
- Online FDP on” Advancements in Wearable Electronics (AWE-2023)” FROM 13-03-2023 to 15-03-2023 organized by VIT Chennai.
- One Week IFDP on “Bio-Inspired Optimization Techniques Programming” from 4.01.2023 to 10.1.2023 organized by Eswari Engineering College.
- One Week IFDP on “Research Innovations and Emerging Advances in Electrical Engineering” from 5.01.2023 to 12.1.2023 organized by Eswari Engineering College.
- Five days FDP on” Advanced Green Computing Technology in Healthcare” from 26.12.2022 to 30.12.2022 organized by Saveetha IEEE branch.
- Five days FDP on “Inculcating Universal Human Values in Technical Education” from 19.12.2022 to 23.12.2022 organized by AICTE
- Two Weeks ATAL FDP on “Integration of Renewable energy technology for Smart Ships and Hands-on-training in solar system design using simulation software” from 31.10.2022 to 5.11.2022 and 7.11.2022 to 11.11.2022 organized by AMET university.
- Three days Online National Level Seminar on “Effective Implementation of NEP Multidisciplinary Education and Strategies” from 10.11.2022 to 12.11.2022 organised by NAAC.
- International Short Term Training Programme on “Research Trends in EV Technology and Sustainable Microgrids” from 05.11.2022 to 09.11.2022 organized by NIT, Jamshedpur.
- Seminar on “overview of IPR & patent filing procedures” organized by IPR Cell, Saveetha Engineering College, Chennai held on August 27th 2022.
- Attended virtual open source conference: Proliferation of open source for Emerging Technologies conducted by IEEE ComSoc Bangalore chapter & Samsung R&D Institute India, Bangalore on July 7, 2022.
- Attended one day webinar on “Overview of Securities Market and Career Growth”, held on 4th April 2022 organised by the BSE Investors Protection Fund as an Investor Awareness Initiative.
- Participated in the two day “International E-Conclave on Industry 4.0 “ organised by the dept.of B.Com-ISM conducted by Hindu college, Pattabiram, Chennai on 27th & 28th of sep 2021.

- Participated in the ISTE sponsored “Three days workshop on Research & Development Activities”, conducted by Sai Ram Engineering college, held from 28th December to 30th December.
- Participated & Completed Successfully AICTE Training & Learning (ATAL) Academy online FDP on “Control systems & Sensors Technology”, from 21st to 25th September 2020 at Indian Institute of Information Technology, Nagpur.
- Participated in the AICTE sponsored six day online STTP on “Electric cars Technologies & Modern Power System – series ii” organised by EEE dept, Kamaraj college of Engineering & Technology during 7th to 12th September 2020.
- Participated in Short Term Training program on “Hands on Training: Virtual Laboratory” under IITM PALS VLAB on 6th august 2020 organised by Ramco Institute of Technology, Rajapalayam in association with ISTE Faculty chapter.
- Participated & Completed Successfully ”Online Spoken FDP on Advanced Communication Laboratory” in Association with industries from 20th July to 25th July 2020 organised by dept of ECE of PSNA College of Engineering & Technology.
- Participated in a 3 day workshop on “Latest Innovative Techniques in Engineering” from 15th July to 17th July 2020 conducted by the dept. Of ICE, Saranathan College of Engineering.

#### **PROFESSIONAL MEMBERSHIPS:**

- IETE – Life Member
- ISRD – Member