

Faculty Profile



Dr. P. MUTHUVEL , M.E., Ph.D
Associate Professor - ECE

HIGHLIGHTS:

- Number of Journal Publications: **28**
- H-Index: **7**
- Project Funding Received: **Nil**
- Patents Published: **6**
- Patents Granted: **2**

PROFESSIONAL LINKS:

- Scopus ID: **57201326418**
- Scopus Link: **<https://www.scopus.com/authid/detail.uri?authorId=57201326418>**
- Google Scholar ID: **<https://scholar.google.com/citations?user=d5BbuNcAAAAJ&hl=en>**
- Anna University Faculty ID: **278921**
- AICTE Faculty ID: **1-4620831339**
- Anna University Supervisor ID: **Nil**
- LinkedIn: **www.linkedin.com/in/muthuvel-p-1bb98831**

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: **8 years and 7 months**
- Industrial Experience: **Nil**

INTERNATIONAL EXPOSURE:

- **Nil**

AREA OF SPECIALIZATION:

- Internet of Things
- Wireless Sensor Networks

- Analog Electronics, Digital Electronics and Power Electronics
- Signals and Systems
- Renewable energy
- Smart grid
- Communication Systems
- Computer Networks

Ph.Ds AWARDED WITH DETAILS:

S:No	Name of Scholar	Title of Thesis	Year of Completion	Full Time/Part Time
NA	NA	NA	NA	NA

Ph.Ds GUIDING:

- **Full Time Scholars: Nil**
- **Part-Time Scholars : Nil**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

Nil

PATENTS PUBLISHED/GRANTED:

1. SEC, A. Ramachandran, C. Anna Palagan, P. Vijayan, S V J Mani, **P. Muthuvel**, “DESIGN AND DEVELOPMENT OF A SMART BATHROOM ODOR DETECTION SYSTEM WITH REAL-TIME DISPLAY”, Application No: 202641030252 A, 08/05/2026.
2. SEC, A. Ramachandran, **P. Muthuvel**, S V J Mani, C. Anna Palagan, “A NOVEL MAGNETIC ABSORPTION MECHANISM FOR THE REMOVAL OF FERROUS DEBRIS FROM ROAD SURFACES”, Application No: 202541090713 A, 31/10/2025.
3. SEC, **P. Muthuvel**, S. Marisargunam, S. Manickam, “NON-INTRUSIVE RETROFIT ADAPTER FOR REAL-TIME ENERGY MONITORING AND APPLIANCE PROFILING USING EDGE-AI”, Application No: 202541076584 A, 29/08/2025.
4. SEC, S. Marisargunam, **P. Muthuvel**, S. Manickam, “Intelligent Self-Cleaning System for Solar Panels”, Application No: 202541018569 A, 14/03/2025.
5. SEC, E. POOVANNAN, P. SANKAR, R Augustian Isaac, C Rajarajachozhan, R Vinoth Raj, P Sundaravadivel, **P Muthuvel**, K Premnath, “Generative Adversarial Network (GAN)-Based Synthetic Data Generation for Privacy-Preserving Machine Learning”, 202441056350, 2/08/2024.

6. SEC, Pandian G, **Muthuvel P**, Mansickam S, Rajesh C, “IOT-BASED Agriculture Robot For Pesticides Spraying”, Design No: 422241-001, 4/7/2024.
7. T. Kamaleshwar, D. Sundaranarayana, R. Jayaraj, **Muthuvel P**, “IOT-Based Product Origin Tracking and Scanning Device”; Design No.: 386468-001, Granted - 18/08/2023.
8. Dheepanchakkravarthy A, **P Muthuvel**, Mr Balaji V R, Senthil Kumar J, Manojkumar P, Srinivasan C, Selvabharathi P, Karunamoorthy B, Ramprabu J, Prakash N, “FPGA based Predictive Current Controlled FI-Dstatcom for Load Compensation in Electric Distribution System”; Application No: 202041040227 A – 2020.

COURSES CERTIFIED:

Cloud Competence



Completed UiPath RPA Trainer: Fundamentals



Completed AWS Academy Graduate - AWS Academy Cloud Foundations



Completed AWS Academy Graduate - AWS Academy Machine Learning

Foundation

➤ AWS Academy accredited Educator for the following AWS Academy Courses

- o AWS Academy Cloud Foundation
- o AWS Academy Machine Learning Foundations

ACHIEVEMENTS AND AWARDS:

- Nil

SPECIAL SESSIONS DELIVERED:

➤ Guest Lecture on “Data Science & IOT Powering the Future”, The American College, Madurai on 11th October 2021.

- Guest Lecture on “IOT in Healthcare”, RVS College of Engineering and Technology, Coimbatore on 21st September 2021.
- Guest Lecture on “Online Digital Logic Simulator for Entrepreneurs”, Sri Krishna College of Engineering & Technology, Coimbatore on 27th August 2021.
- Resource Person for the Internship Training Program on “Internet of Things”, V.V.Vanniaperumal College for Woman, Virudhunagar on 7th – 21st April 2021.
- Resource Person for the Hands on Training Program on “Arduino Projects”, V.V.Vanniaperumal College for Woman, Virudhunagar on 13th February 2021.
- Resource Person in the National Level Faculty Training Program on “Software Enrichment Program - DIGITAL LOGIC DESIGN SIMULATOR,” organized by Department of Physics, Kalasalingam Academy of Research and Education, Krishnankoil, 07th October 2020.

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

Nil

PROFESSIONAL MEMBERSHIPS:

International Professional Bodies:

- Membership with IEEE
- Lifetime membership with the International Association of Engineers (IAENG).

National Professional Bodies:

- Lifetime membership with the Indian Society for Technical Education (ISTE).

OTHER DETAILS (If any):

- ≈ Mariprasath, T., Marisargunam, S., G, R., **Muthuvel, P.**, Varshney, D., & Bereznynchenko, V. (2026). Thermally robust maximum power point tracking of proton exchange membrane fuel cells using hybrid Moth flame–Mayfly optimization. Energy Exploration & Exploitation, 01445987261491997.
- ≈ Athiraja, A., Appavoo, J., **Muthuvel, P.**, & Marisargunam, S. (2026). Postharvest processing and preservation of oyster mushroom (*Pleurotus ostreatus*): a review of physicochemical transformations, nutritional stability, and computational intelligence-based shelf-life enhancement. European Food Research and Technology, 252(8), 286.
- ≈ **Muthuvel, P.**, Gokulkannan, K., Pandiyan, G., & Pradeep, A. (2026). A Bi-LSTM and RSO-Based Strategy for Energy Management in Renewable-EV Hybrid Microgrids. Sustainable Computing: Informatics and Systems, 101424.
- ≈ Mariprasath, T., Marisargunam, S., G, R., **Muthuvel, P.**, Bustanji, S. A., Güven, C. A., & Geremew, M. S. (2026). An integrated high-gain boost converter and Grasshopper Optimization Framework for fast global MPPT and high-efficiency solar PV under dynamic irradiance. Energy Exploration & Exploitation,

- ≈ **P. Muthuvel** et al., Development of an intelligent PV-powered conversion topology for next-generation domestic appliance integration, Australian Journal of Electrical and Electronics Engineering, Taylor and Francis, 2025.
- ≈ **P. Muthuvel**, G. Pandian., S. Manickam, and C. Rajesh, “Optimizing Road Networks: A Graph-Based Analysis with Path-finding and Learning Algorithms”. *Int. J. ITS Res.* (2024).
- ≈ **Muthuvel, P.**, Raja Sekar, R., Rajkumar, T.D., Mari Selvan, R. (2024). Optimization of IoT Devices in Smart Home to Minimize Cost Energy Conservation Based on Human Detector. In: Kumar, S.R., Kadry, S., Gayathri, N., Chelliah, P.R. (eds) Proceedings of the First International Conference on Data Engineering and Machine Intelligence. ICDEMI 2023. Lecture Notes in Electrical Engineering, vol 1261. Springer, Singapore.
- ≈ K. Meena, T. Veeramakali, Ngangbam Herojit Singh, L. Jayakumar & **P. Muthuvel**, “Deep learning techniques for prediction of pneumonia from lung CT images”. Soft Computing - Springer (2023).
- ≈ Dheepanchakkravarthy A, **Muthuvel P**, Selvan MP, and Moorthi S, "Predictive current control of FL-shunt active power filter for dynamic and heterogeneous load compensation", Electrical Engineering - Springer, Vol. 103, No. Issue 04, , pages 2147 - 2160 , AUG 2021, D. Ganeshaperumal, R. Ramachandran, Seshadhri Srinivasan, **Muthuvel P**, B. Subathra, Korkut Bekiroglu. “Real-time Extremum Seeking Controller for Brushless DC Hub Motors in Electric Vehicles”. IET Electric Power Applications , Volume 14, Issue 12, December 2020, p. 2438 – 2449. (ISSN: 1751-8679), 2020.
- ≈ **P. Muthuvel**. Solar Powered DC Nano-grid with Multi Agent Control Strategy. International Journal of Innovative Technology and Exploring Engineering (IJITEE), Issue 2S2, December 2019, Pages 971-977. (ISSN: 2278-3075); 2019.
- ≈ **P. Muthuvel**, S Arul Daniel, Sajal K Paul. Sizing of PV array in a DC Nano-grid for Isolated households after alteration in time of consumption. Engineering Science and Technology, an International Journal, Volume 20, Issue 6, December 2017, Pages 1632-1641. (ISSN: 2215-0986); 2017.
- ≈ **P. Muthuvel** , S Arul Daniel, D.G. Yazhini. Retrofitting domestic appliances for PV powered DC Nano-grid and its impact on net zero energy homes in rural India. Engineering Science and Technology, an International Journal, Volume 19, Issue 4, December 2016, Pages 1836-1844. (ISSN: 2215-0986); 2016.

Scopus and Other Journals:

1. B. Pitchaimanickam, **P. Muthuvel** and R. Rajasekar, "Multi-Verse Optimization for Node Localization in Wireless Sensor Networks," 2024 Third International Conference on

Electrical, Electronics, Information and Communication Technologies (ICEEICT), Trichirappalli, India, 2024, pp. 1-5, doi: 10.1109/ICEEICT61591.2024.10718640.

2. Vignesh, E., & **Muthuvel, P.** (2024, February). An Improved Framework for Enhancing Security And Efficiency In Reading Smart Grid Technologies. In 2024 2nd International Conference on Computer, Communication and Control (IC4) (pp. 1-5). IEEE.
3. B Pitchaimanickam., **Muthuvel P.**, Rajasekar R, “Sine Cosine Algorithm based Optimal Cluster Head Selection in Wireless Sensor Networks”,2023 5th International Conference on Smart Systems and Inventive Technology (ICSSIT), Vol. , no. , pp.577 - 582
4. Mahendran N., **Muthuvel P.**, Arunprasath T., Pallikonda Rajasekaran Murugan., Kottaimalai Ramaraj, “Identification and Segmentation of Tumour in Brain MRI using Deep Learning Techniques”, 2023 Second International Conference on Electronics and Renewable Systems (ICEARS) [National], Vol. , no. , pp.1214 - 1219
5. Saravanan Alagarsamy., **Muthuvel P.**, Sudheer Kumar K V., Madhusudhan Reddy M., Mallikarjuna Naidu M., Venkat Kumar M ,“System for Predicting the Diabetes using Machine Learning Techniques”, 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), Vol. , no. , pp.1333 - 1338
6. **Muthuvel P.**, Jaswanth T., Shaik Firoz., Navya Sri S., Mukhesh N, “Emotion Recognition in Speech Signals using MFCC and Mel-Spectrogram Analysis”, 2023 International Conference on Networking and Communications (ICNWC), Vol. , no. , pp.1 - 5
7. **Muthuvel P.**, B Pitchaimanickam., Azhagesan Dheepanchakkravarthy , “Design and Performance Analysis of a Solar Powered Dough Maker”, 2023 7th International Conference on Trends in Electronics and Informatics (ICOEI) , Vol. , no. , pp.111 - 117
8. B Pitchaimanickam., **Muthuvel P.**, Rajasekar R, “Ant Lion Optimizer based Multi-sink Placement in Wireless Sensor Networks”, 2023 7th International Conference on Trends in Electronics and Informatics (ICOEI), Vol. , no. , pp.510 - 517
9. Mahendran N., **Muthuvel P.**, Arun Prasath Thiyagarajan., Pallikonda Rajasekaran Murugan., Bridget Nirmala J., Kottaimalai Ramaraj, “Precise Identification and Segmentation of Brain Tumour in MR Brain Images Using Salp Swarm Optimized K-Means Clustering Technique”,2023 2nd International Conference on Edge Computing and Applications (ICECAA), Vol. , no. , pp.877 – 885.
10. Dheepanchakkravarthy A., Balaji V R., **Muthuvel P.**, Saravanan S., Pandiayan P, “Design and Development of Voice and Keypad Controlled Smart Wheelchair”, 2022 Smart Technologies, Communication and Robotics (STCR), Vol. , no. , pp.127 - 133

11. Mari Selvan R., Jeyaranjani J., **Muthuvel P.**, Raja Sekar R., Nagaraj Palanigurupackiam, “E-Voting Based on Face Recognition Using KNN Classifier”, 2022 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI) , Vol. , no. , pp.1 – 3.
12. Balaji V.R., Kalvinathan V., Dheepanchakkravarthy A., **Muthuvel P.**, “IoT Enabled Smart Irrigation System”, 2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation, ICAECA 2021.
13. Azhagesan D., **Muthuvel P.**, Jeyaraj S.K., “Proficiency Estimation of Four-Leg DSTATCOM for Compensating Load of Arc Furnace in the Distribution System”, 2019 International Conference on Clean Energy and Energy Efficient Electronics Circuit for Sustainable Development, INCCES 2019 .