



SETHU INSTITUTE OF TECHNOLOGY

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Pulloor, Kariapatti –Taluk. Virudhunagar Dist-626115.



Department of EEE		
Name	Dr.A.Manivanna Boopathi	
Date of Birth	22.07.1976	
Unique ID	1-12363177658	
Educational Qualifications	B.E.,M.E.,Ph.D.	
Designation	Professor	
Email ID	manivannaboopathi@sethu.ac.in	
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Experience	Teaching	Total
	22.5 years	22.5 years
Date of Joining the Institution	22.05.2024	
Area of Specialization	Control System	
Courses taught	Control System, Soft computing, System Identification and Adaptive control, Industrial Automation and Control, Electric Vehicle Architecture.	
Research Focus	Control for PEM Fuel cell, Control for ABS, Data Mining for health care, Machine learning for medical diagnosis	
Subject Competency	Control System, Adaptive control, Vehicle dynamics, EV Technology.	
No. of papers published	International Journals	Conferences
	17	15
PG Specialization	Control System	
Ph.D. Specialization	Adaptive control	
Patents (Filed & Granted)	01	
No. of Books published with details (Name of the book, Publisher with ISBN, year of publication, etc.)	<ol style="list-style-type: none">1. Subha Velappan*, Manivanna Boopathi Arumugam and Zafer Comert, “Enhanced Classification Performance of Cardiotocogram Data for Fetal State Anticipation using Evolutionary Feature Reduction Techniques”, Handbook of Artificial Intelligence in Biomedical Engineering, Apple Academic Press, 2021. (ISBN: 9781003045564)2. S.Niraja P Rayen, V. Subha and A. Manivanna Boopathi “Machine Learning Techniques for Glaucoma Screening using Optic Disc Detection”, in the book “Computational Intelligence: Theory and Applications”, Wiley Scrivener Publishers, November 2024. (ISBN: 9781394214228)	



Academic Credentials

Level	Degree	Specialization	University	Year of Completion
UG	B.E	Instrumentation and Control Engineering	Madurai Kamaraj University	1997
PG	M.E	Control System Engineering	Jadavpur University, Kolkata.	2002
Ph.D.	Ph.D.	Electrical Engineering – Control System	Anna University, Chennai	2016

Details of Journal Publication:

International Journals:

1. S Mary Selvi, V Subha, A Manivanna Boopathi, S Thanu, “Deep Learning Based Tympanic Membrane Segmentation Using Residual Double Attention UNet”, Journal of Information Systems Engineering and Management 10 (3), 1159-1174, Feb 2025.
2. S Mary Selvi, V Subha, A Manivanna Boopathi, S Thanu, “Deep Learning Approaches for Otitis Media Classification : A Comprehensive Survey”, Journal of Neonatal Surgery 14 (7), 64-72.
3. V. Subha*, G. Gomathi, **A. Manivanna Boopathi**, “An exploration of ventricle regions segmentation and multiclass disease detection using cardiac MRI”, International Journal of Imaging Systems and Technology, pp. 1-15, July 2023. doi:10.1002/ima.22938
4. **A.Manivanna Boopathi***, E.A.Mohamed Ali, Subha Velappan and A.Abudhahir, “Forecasting Oil and Gas Production and Consumption in Kingdom of Bahrain using Optimized Grey Forecasting Models”, International Journal of Computing and Digital Systems, 13(1), 475-484, 2023 (SCOPUS).
5. **A.Manivanna Boopathi***, E.A.Mohamed Ali, Subha Velappan and A.Abudhahir, “Forecasting the Generation and Consumption of Electricity and Water in Kingdom of Bahrain using Grey Models”, International Journal of Computing and Digital Systems, 10(1), 395-402, 2021. (SCOPUS)
6. E.A.Mohamed Ali*, **A.Manivanna Boopathi**, A.Abudhahir and Subha Velappan, “Pressure Regulation in PEM Fuel Cell using Direct Active Fuzzy Non-Linear Controller”, International Journal of Computing and Digital Systems, 9(1): 61-68, 2020. (SCOPUS)
7. E.A.Mohamed Ali*, A.Abudhahir and **A.Manivanna Boopathi**, “Direct Active Fuzzy PI Controller for Pressure Regulation in PEM Fuel Cells”, Journal of Electrical Engineering, 8(4): 1-9, 2018.
8. Zhongheng Zhang*, Victor Trevino, Sayed Shahabuddin Hoseini, Smaranda Belciug, **Manivanna Boopathi Arumugam**, Florin Gorunescu and Subha Velappan, “Variable selection in Logistic

- regression model with genetic algorithm”, *Annals of Translational Medicine*, 6(3):45, 2018. DOI: 10.21037/atm.2018.01.15. (SCIE)
9. E.A.Mohamed Ali*, A.Abudhahir and **A.Manivanna Boopathi**, “Firefly Algorithm optimized PI controller for pressure regulation in PEM Fuel Cells”, *Journal of Computational and Theoretical Nanoscience*, Vol. 15, No. 1, pp. 1–9, 2018. (SCOPUS)
 10. E.A.Mohamed Ali*, A.Abudhahir and **A.Manivanna Boopathi**, “Sliding Mode Controller for Pressure Regulation in PEM Fuel Cell”, *Journal of Communications Technology, Electronics and Computer Science*, Vol. 15, pp. 5-15, 2017.
 11. V.Subha*, D.Murugan and **A.Manivanna Boopathi**, “A Hybrid Filter-Wrapper attribute reduction approach for Fetal risk anticipation”, *Asian journal of research in social sciences and humanities*, vol. 7, no. 2, pp. 1094-1106, February 2016.
 12. V.Subha*, Dr.D.Murugan, S.Prabha and **A.Manivanna Boopathi**, “Genetic Algorithm based feature subset selection for fetal state classification”, *Journal of Communications Technology, Electronics & Computer Science*, vol.2, pp.13-17, 2015.
 13. V.Subha*, D.Murugan and **A.Manivanna Boopathi**, “A Hybrid Filter-Wrapper attribute reduction approach for Fetal risk anticipation”, *Asian journal of research in social sciences and humanities*, vol. 7, no. 2, pp. 1094-1106, February 2016.
 14. **A.Manivanna Boopathi*** and A.Abudhahir, “Adaptive Fuzzy Sliding Mode Controller for wheel slip control in antilock braking systems”, *Journal of Engineering Research*, Vol. 4, Issue 2, pp. 132-150, June 2016. DOI: 10.7603/s40632-016-0018-y.
 15. **A.Manivanna Boopathi*** and A.Abudhahir, “Design of Grey-Verhulst Sliding Mode Controller for Antilock Braking System”, *International Journal of Control Automation and Systems*, Vol.14, No.3, pp.763-772, June 2016. DOI:10.1007/s12555-014-0466-9.
 16. V.Subha*, Dr.D.Murugan, S.Prabha and **A.Manivanna Boopathi**, “Genetic Algorithm based feature subset selection for fetal state classification”, *Journal of Communications Technology, Electronics & Computer Science*, vol.2, pp.13-17, 2015.
 17. **A.Manivanna Boopathi*** and A.Abudhahir, “Firefly Algorithm tuned Fuzzy Set-Point Weighted PID Controller for Antilock Braking Systems”, *Journal of Engineering Research*, Vol. 3, Issue 2, pp. 1-16, June 2015. DOI: 10.7603/s40632-015-0015-6.

International and National conferences:

1. A. Manonmani, **A. M. Boopathi**, V. A. Rani, A. Rithubarnika, H. G. Priya and A. Varshaleela, "IoT Based Home Automation Control using Feedback System," *2024 International Conference on IoT Based Control Networks and Intelligent Systems (ICICNIS)*, Bengaluru, India, 2024, pp. 464-468, doi: 10.1109/ICICNIS64247.2024.10823290.
2. E.A.Mohamed Ali*, **A.Manivanna Boopathi**, A.Abudhahir and Subha Velappan, “Enhancement of PEM Fuel Cell Performance with Direct Active Fuzzy Sliding Mode Controller”, *IEEE Advances in Science and Engineering Technology Multi-Conference (ASET’20)*, Dubai, February 4-6, 2020.

3. E.A.Mohamed Ali*, **A.Manivanna Boopathi**, A.Abudhahir and Subha Velappan, “Direct Active Fuzzy Non-Linear Controller for Pressure Regulation in PEM Fuel Cell”, The IEEE 8th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'19), Bahrain, April 15-17, 2019. (SCOPUS)
4. S.Niraja P Rayen*, V. Subha and **A.Manivanna Boopathi**, "Glaucoma Screening with Optic disc segmentation by Level Set and Super pixel", International Conference on Network, Image and Security (ICNIS'19), India, April 10-11, 2019.
5. Zafer CÖMERT*, Zhan Yang, Subha Velappan, Adnan Fatih Kocamaz and **Manivanna Boopathi Arumugam**, “Performance Evaluation of Empirical Mode Decomposition and Discrete Wavelet Transform for Computerized Hypoxia Detection and Prediction”, 26th IEEE Signal Processing and Communication Applications (SIU) conference, Turkey, 2018. (Web of Science)
6. Zafer CÖMERT*, Zhan Yang, Subha Velappan, Adnan Fatih Kocamaz and **Manivanna Boopathi Arumugam**, “The Influences of Different Window Functions and Lengths on Image-based Time-Frequency Features of Fetal Heart Rate Signals”, 26th IEEE Signal Processing and Communication Applications (SIU) conference, Turkey, 2018. (Web of Science)
7. **A.Manivanna Boopathi*** and M.Vinoshia Sweety, “Design of Sliding Mode Controller for Antilock Brake Systems”, International Conference on Computing and Control Engineering (ICCCE 2012), Chennai, India, April, 2012.
8. **A.Manivanna Boopathi***, V.Subha, Satyanand Singh and P.Sivakumar, “Text-Dependent Speaker Recognition System in Presence monitoring Application”, International Conference on Systemics, Cybernetics and Informatics –ICSCI – 2008, Hyderabad, India, January, 2008.
9. **A.Manivanna Boopathi***, Satyanand Singh and Abhay Kumar, “Design of Adaptive Speaker Identification System using LPC Coefficients”, International Conference on Systemics, Cybernetics and Informatics –ICSCI – 2007, Hyderabad, India, January, 2007.
- 10.**A.Manivanna Boopathi***, A. Abudhahir, M.Vinoshia Sweety and R.Sindhu, “Fuzzy Sliding Mode Controller for Antilock Brake System”, 4th National conference on Recent Trends in Instrumentation Applications (RETINA – 2015), Kovilpatti, India, February, 2015.
- 11.**A.Manivanna Boopathi** and J.Juanola Pearl*, “Design of Cascade PID Controllers for Temperature Control of Polymerization Reactor”, 2nd National Conference on Emerging Trends in Computing & Communication Technologies, (NCECCT–2013), Tirunelveli, India, March, 2013.
- 12.**A.Manivanna Boopathi** and J.Isac Daniel*, “Optimal control of Nonlinear inverted pendulum using PID Controller & LQR”, 2nd National Conference on Emerging Trends in Computing & Communication Technologies, (NCECCT–2013), Tirunelveli, India, March, 2013.
- 13.**A.Manivanna Boopathi**, V.S.Sree Balaji*, R.Saravanan and M.Rajkumar, “Ultrasonic Aided Advanced Electrical Discharge Machine Using TRIZ”, National seminar and exhibition on Non-destructive evaluation – NDE 2009, Coimbatore, India, December, 2009.

14. **A.Manivanna Boopathi*** and B.Raja Parameswaran, “Scaling and Bandwidth-parameterization based Controller Tuning”, National Conference on Recent Trends in Instrumentation Applications, Kovilpatti, India, December, 2004.
15. **A.Manivanna Boopathi***, Satyanand Singh and B.Raja Parameswaran, “Transfer Function Evaluation of Linear, Time-invariant Multi Variable Systems”, National Conference on Multivariable Control Systems, Chennai, India, March, 2004.

Details of Book Chapter and Books Published:

3. Subha Velappan*, **Manivanna Boopathi Arumugam** and Zafer Comert, “Enhanced Classification Performance of Cardiotocogram Data for Fetal State Anticipation using Evolutionary Feature Reduction Techniques”, Handbook of Artificial Intelligence in Biomedical Engineering, Apple Academic Press, 2021. (ISBN: 9781003045564)
4. S.Niraja P Rayen, V. Subha and **A. Manivanna Boopathi** “Machine Learning Techniques for Glaucoma Screening using Optic Disc Detection”, in the book “Computational Intelligence: Theory and Applications”, Wiley Scrivener Publishers, November 2024. (ISBN: 9781394214228)

Details of Patents Filed and Granted:

Title of the invention: Prediction and Classification of Skin Diseases using Ensemble Data Mining Techniques

Country: INDIA

Publication Date: 12/04/2024

Expert Lecture Delivered in the recent past:

1. Guest Lecture on the topic, “Soft Sensors - The future of Process Monitoring and Control”, at Department of EIE, Saveetha Engineering College, on 31.08.2024.
2. Handled a session on the topic, “Soft Sensors Principles, Applications, and Future Prospects”, in the FDP titled “Frontiers in Electrical and Electronics Engineering: Key technologies and applications” at Nellai College of Engineering, on 20.02.2025.
3. Guest Lecture on the topic, “Soft Sensors Principles, Applications, and Future Prospects”, at Cheran College of Technology, on 06.03.2025.