gurusaravana@ieee.org | | | gurusaravana | ORCID ID

Dr. Saravanakumar Gurusamy

B.E., M.Tech., PhD., (SM-IEEE, LM-ISTE,M-ASEE.,),



Scopus ID: 57226273113 | Link

https://scholar.google.com/citations?user=2VeSyhEAAAAJ&hl=en | Link

gurusaravana@ieee.org

I. CURRICULUM VITAE - SUMMARY

Qualified to Teach PG/UG Level course	Related to Electrical, Electronics, Instrumentation, Control, Robotics, Mechatronics and Bio-Medical Engineering	
Current Position	Associate Professor, Department of Electrical Automation and Control, FDRE TVT Institute, Addis Ababa, Ethiopia	
Academic Qualifications	Ph.D., (Instrumentation & Control Engineering) M.Tech., (Control & Instrumentation Engineering) B.E., (Electronics & Instrumentation Engineering)	
Experience	18+ years in Teaching, 8.2 Years in Research	
Thesis/Project Supervision	Postgraduate Thesis: 41	Undergraduate Project: 24
Research Output	Journal Paper - 21, Q1- 8, Q2 - 2, Q3 - 3, Q4 - 1, Others: 7 SCI - 10, Scopus - 8, Others - 2	Conference paper - 11 Scopus: 8, Others : 3.
Publication Metrics	Citation: 478 (h-index: 11, i10-index: 14)	
Professional Memberships & Roles	|SM-IEEE,IEEE-CSS, IEEE- IAS, IEEE- RAS|, LM-ISTE, M-ASEE Secretary, IEEE Ethiopia Subsection	
Conference Organization	National : 4	International: 1 in Proposal
Academic participation	Workshops - 15 Internship - 1	Webinar/Seminar/Training - 7 STTP/FDP - 5
Academic Dissemination	Guest Lecture - 3 FDP Sessions - 2	Keynote –1 Workshop sessions - 2
Other Roles and responsibilities	Reviewer, Conference organizer/committee member, Exam coordinator, Research coordinator, Placement coordinator, NSS coordinator, RRC-In Charge. Hostel Residential Tutor, Deputy warden - hostel.	

- Academic qualifications & experiences are available in Section II (page 2) & Section III (page 2), respectively.
- Awards & Recognition and Professional membership details are given in Section IV (page 3) & Section V (page 3), respectively.
- Full list of Journal and conference publications are available in Section VI.A (page 4) & Section VI.B (page 5), respectively.
- Academic Leadership & Responsibilities related details are given Section VIII (page 6)
- Additional Personal particulars, References are available in Section X & Section XI (page 7)
- The courses taught & laboratories handled in Electrical/ Electronics / Instrumentation /Automation / Control Engineering at UG & PG level are listed in Section XIII.A (page 7).
- List of PG thesis/UG project guidances are given in Section XIII.B (page 8) and Section XIII.C (page 10), respectively.
- Participation in Workshops/Seminars/Training are listed in Section XIII.D (page 12)



II. ACADEMIC QUALIFICATIONS

Kalasalingam Academy of Research and Education . . . . . 2011 – 2017

Ph.D. in Instrumentation and Control Engineering
Thesis: *Metaheuristic Algorithms for the Identification of Nonlinear Systems and Multivariable PID Controller Tuning*

Thiagarajar College of Engineering . . . . . 2007 – 2009

M.Tech in Control and Instrumentation Engineering
First Class with Distinction
Thesis: *Evolutionary Algorithm based Volterra System Identification*

National Engineering College . . . . . 2000 – 2004

B.E. in Electronics and Instrumentation Engineering
First Class
Project : *Detection of cancer cells in CT Liver Images using ANN*

III. PROFESSIONAL EXPERIENCES

Presidency University . . . . . 2025 – Present

Associate Professor, Electrical and Electronics Engineering Bengaluru, INDIA

- Handled theory and practical courses for B.Tech - Electrical and Electronics Engineering

FDRE Technical and Vocational Training Institute (FTI) . . . . . 2019 – 2025

Associate Professor, Electrical Automation and Control Technology Addis Ababa, Ethiopia

- Handled theory and practical courses for MSc - Electrical automation and control technology stream
- Postgraduate curriculum design and revision in Electrical Automation & Control Technology
- Supervised 40+ MSc theses in the related domain of control, robotics, and IoT.
- Active member of LUBAN Workshop – Robotics and AI Centre.
- Engaged in technology transfer and community service projects
- Secured grants and delivered technical training on electric stove standardization and labeling, Solar PV and Solar Thermal training for small scale vendors from giz-EnDev, Ethiopia
- Team member for Program Revision and diversification of UG/PG Programs in FTI
- Team member to develop a roadmap for the Ethiopian civil aviation skills framework development.

Kalasalingam Academy of Research and Education (KARE) . . . . . 2018 – 2019

Senior Assistant Professor Gr-III Srivilliputhur, India

- Handled undergraduate theory and practical courses for Electronics and instrumentation engineering.
- Handled postgraduate theory and practical courses for Control and instrumentation engineering.
- Coordinated and guided UG final semester projects and guided PG thesis
- coprdinated - Advanced Diploma in ”Industrial Automation and Internet of Things” in connection with National Institute of Electronics and Information Technology, Calicut.

University of Gondar (UoG) . . . . . 2014 – 2018

Lecturer, Electrical & Computer Engineering Gondar, Ethiopia

- Handled theory and practical courses for BSc - Electrical and Computer Engineering (Control stream)
- Designed MSc curricula in embedded systems and instrumentation & control engineering.
- Advisory member for Robotic center of RoboSoccer Team - iCog Makers Initiative with iCog Labs, Ethiopia
- Mentored RoboSoccer team to 2nd prize at AfRoboCup 2018.
- Initiated international MoUs with universities in India and Romania

Kalasalingam Academy of Research and Education (KARE) . . . . . 2009 – 2014

Assistant Professor Srivilliputhur, India

- Handled undergraduate theory and practical courses for Electronics and instrumentation engineering.
- Handled postgraduate theory and practical courses for Control and instrumentation engineering.
- Taught over 15 specialized UG and PG courses related to Electronics, control systems, instrumentation, Robotics and automation.
- Coordinated and guided UG final semester projects and guided PG thesis
- Coordinated and advised PG theses
- Core member of placement team
- Coordinated industrial communication activities like industrial visit, industrial expert lecture, curriculum feedback and upgradation, and placement activities
- Co-ordinated National Instrument LabVIEW Academy.
- Acted as deputy warder for men's hostel

Lakshmi Ammal Polytechnic College . . . . . 2004 – 2007

Lecturer, Electronics and Communication Kovilpatti, India

- Delivered foundational courses and practical courses related Electrical, Electronics, and Instrumentation.
- Established bio-medical instrumentation lab
- Guided final semester projects

IV. AWARDS & RECOGNITION

- Second Prize for Paper Presentation at Thiagarajar College of Engineering (RAYS 2001) | 16 March 2001
- Young Scientist Fellowship – Tamil Nadu State Council for Science and Technology (TNSCST), 2011.
- Best Paper Awards
  - ICSCS 2016 | July, 2016
  - ICSGSM 2021 | 19–20 April, 2021
- Secretary - IEEE Ethiopia Subsection

V. PROFESSIONAL MEMBERSHIPS

IEEE Senior Member
Institute of Electrical and Electronics Engineers

IEEE Member
Control System Society
IEEE Robotics and Automation Technical Committee Robot Control
Industrial Application Society
Sensor Council
System Council

ASEE Member
American Society for Engineering Education

ISTE Life Member
Indian Society for Technical Education

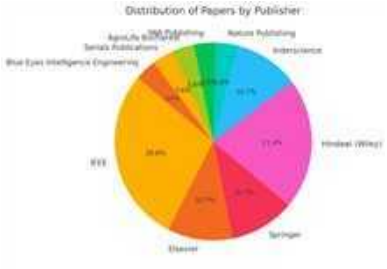
IAENG (No: 164740, Since 4/01/2016) Life Member
International Association of Engineers, No: 164740, Since 4/01/2016

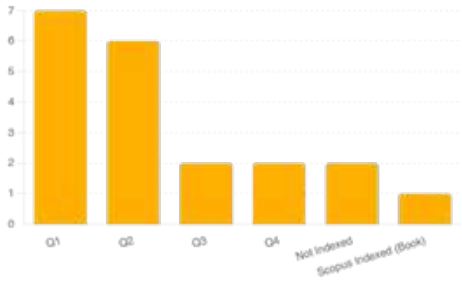
VI. PUBLICATIONS

- IEEE Access, Scientific Reports, Journal of Healthcare Engineering, Springer ICSCS, IFAC CASE
- Full list is also available via [Google Scholar](https://scholar.google.com/citations?user=2VeSyhEAAAAJ&hl=)



Metrics: Total Citations: 452; h-index: 11; i10-index: 14





VI.A. List of Journal Publications

- Journal Publications: 21 (Q1: 8, Q2: 6, Q3: 2, Q4: 2, Others: 3)

1. T. Hailemariam Gebrecherkos, A. Gebrehiwot Berhe, **Saravanakumar Gurusamy** and C. M. Abdissa, "Fuzzy Sliding Mode Control for Dynamic Walking Assistance in Lower Limb Exoskeletons," in IEEE Access, vol. 13, pp. 161235-161249, 2025. **SCI (Q1)**.
2. Quang-Huy Tran, Bhisham Sharma, Luong Thi Theu, Duc-Tan Tran, Subrata Chowdhury, Chandran Karthik, and **Saravanakumar Gurusamy**, "Frequency-hopping along with resolution-turning for fast and enhanced reconstruction in ultrasound tomography," **Scientific Reports**, vol. 14, no. 1, pp. 15483, 2024. **SCI (Q1)**.
3. S. K. Thangarasu, T. Mohanraj, K. Devendran, M. Rajalakshmi, S. Chowdhury, and **Saravanakumar Gurusamy**, "Prediction of Flank Wear during Turning of EN8 Steel with Cutting Force Signals Using a Deep Learning Approach," **Mathematical Problems in Engineering**, vol. 2023, pp. 1–12, 2023. |Scopus| (Q2).
4. Luong Thi Theu, Quang-Huy Tran, Bhisham Sharma, Duc-Tan Tran, Subrata Chowdhury, Chandran Karthik, and **Saravanakumar Gurusamy**, "Tikhonov Regularization and Perturbation-Level Tuning for the CNM in Pharmacokinetics," **IEEE Access**, vol. 11, pp. 30057–30068, 2023. **SCI (Q1)**.
5. K. M. A. Kadhar, N. Natarajan, M. Vasudevan, and **Saravanakumar Gurusamy**, "Parameter Evaluation of a Nonlinear Muskingum Model Using a Constrained Self-Adaptive Differential Evolution Algorithm," **Water Practice and Technology**, vol. 17, no. 11, pp. 2396–2407, 2022. |Scopus| (Q3).
6. S. Sivakumar, B. Neeraja, M. Jamuna Rani, Harishchander Anandaram, S. Ramya, Girish Padhan, and **Saravanakumar Gurusamy**, "Machine Learning Approach on Time Series for PV-Solar Energy," **Advances in Materials Science and Engineering**, 2022. |Scopus| (Q2).
7. P. S. Subudhi, M. Thilagaraj, S. Ganesh, S. Diwakaran, P. Naveen, **Saravanakumar Gurusamy**, and M. Pallikonda Rajasekaran, "Current-Fed Bidirectional DC–DC Converter Topology for Wireless Charging System Electrical Vehicle Applications," **Wireless Communications and Mobile Computing**, 2021. |Scopus| (Q2).
8. M. Thilagaraj, B. Dwarakanath, S. Ramkumar, K. Karthikeyan, A. Prabhu, **Saravanakumar Gurusamy**, M. P. Rajasekaran, and N. Arunkumar, "Eye-Movement Signal Classification for Developing Human–Computer Interface Using Electrooculogram," **Journal of Healthcare Engineering**, 2021. |Scopus| (Q2).
9. Goni M. Nahiduzzaman, M. S. Anower, M. R. Islam, M. Ahsan, J. Haider, **Saravanakumar Gurusamy**, R. Hassan, and M. R. Islam, "A Novel Method for Multivariant Pneumonia Classification Based on Hybrid CNN–PCA Feature Extraction Using Extreme Learning Machine with CXR Images," **IEEE Access**, vol. 10, pp. 227–235, 2021. **SCI (Q1)**.
10. S. R. Palani, D. Durairaj, K. Balasubramaniyan, and **Saravanakumar Gurusamy**, "Estimating the Survival of Aqua Fauna by Image-Analysis Techniques from Video Sequences of Pond Aquaculture," **AgroLife Scientific Journal**, vol. 10, no. 1, pp. 227–235, 2021. **SCI (Q3)**.
11. Nazmus Sakib, Rodina Binti Ahmad, Mominul Ahsan, Md Abdul Based, Khalid Haruna, Julfikar Haider, and **Saravanakumar Gurusamy**, "A Hybrid Personalized Scientific Paper Recommendation Approach Integrating Public Contextual Metadata," **IEEE Access**, 2021. **SCI (Q1)**.

12. N. Jahan, M. M. Rahman, M. Ahsan, M. A. Based, M. M. Rana, **Saravanakumar Gurusamy**, and J. Haider, "Photonic Crystal Fiber-Based Biosensor for Pseudomonas Bacteria Detection: A Simulation Study," **IEEE Access**, vol. 9, pp. 42206–42215, 2021. **SCI (Q1)**.

13. K. Chandran, R. Murugesan, **Saravanakumar Gurusamy**, Asan K. Mohideen, S. Pandiyan, A. Nayyar, M. Abouhawwash, and Y. Nam, "Modified Cascade Controller Design for Unstable Processes with Large Dead Time," **IEEE Access**, vol. 8, pp. 157022–157036, 2020. **SCI (Q1)**.

14. **Saravanakumar Gurusamy**, C. V. Baalachandar, and Mohaideen Abdul Kadhar, "Environmental Condition Monitoring System of Textile Industry for Sustainable Development Goal," **International Journal of Innovative Technology and Exploring Engineering**, vol. 9, pp. 986–991, 2019. Not Indexed.

15. B. Subathra, **Saravanakumar Gurusamy**, K. Ramkumar, S. Srinivasan, and N. Muthukumar, "Path-Planning in Autonomous Electric Vehicle Using Nonlinear State Estimation and Behaviour-Based Controllers," **International Journal of Vehicle Systems Modelling and Testing**, vol. 12, pp. 304–319, 2018. |Scopus| (Q4).

16. Seshadhri Srinivasan, **Saravanakumar Gurusamy**, B. Subathra, N. Sundarajan, U. Kotta, and S. Ramasamy, "Adaptive Controller for Networked Control Systems Subjected to Random Communication Delays," in **Advances in Intelligent Systems and Computing**, vol. 633, pp. 78–94, 2018. |Scopus|.

17. D. Ganesha Perumal, Seshadhri Srinivasan, B. Subathra, **Saravanakumar Gurusamy**, and Ramakalyan Ayyagari, "MILP-Based Autonomous Vehicle Path-Planning Controller for Unknown Environments with Dynamic Obstacles," **International Journal of Heavy Vehicle Systems**, vol. 23, no. 4, pp. 350–369, 2016. **SCI (Q2)**.

18. Seshadhri Srinivasan, **Saravanakumar Gurusamy**, K. Valarmathi, and Willjuice M. Iruthayarajan, "Lagrangian-Based State Transition Algorithm for Tuning Multivariable Decentralized Controller," **International Journal of Advanced Intelligence Paradigms**, 2016. |Scopus| (Q3).

19. **Saravanakumar Gurusamy**, K. Valarmathi, M. Pallikonda Rajasekaran, Seshadhri Srinivasan, and Willjuice M. Iruthayarajan, "Tuning Multivariable Decentralized PID Controller Using State Transition Algorithm," **Studies in Informatics and Control**, vol. 24, no. 4, pp. 367–378, 2015. **SCI (Q2)**.

20. Satheesh Kumar, **Saravanakumar Gurusamy**, B. Subathra, and Seshadhri Srinivasan, "An Approach for Short-Term Load Forecasting Using RBFNN in the Smart Grid," **International Journal of Control Theory and Applications**, vol. 8, no. 5, pp. 2169–2177, 2015. Not Indexed.

21. Asan Mohideen, **Saravanakumar Gurusamy**, K. Valarmathi, D. Devaraj, and T. K. Radhakrishnan, "Real-Coded Genetic Algorithm for System Identification and Tuning of a Modified Model Reference Adaptive Controller for a Hybrid Tank System," **Applied Mathematical Modelling**, vol. 37, no. 6, pp. 3829–3847, 2013. **SCI (Q1)**.

VI.B. List of Conference Publications

- 11 International Conference Presentations (Springer, IEEE, and IFAC)
  - 8 Scopus indexed

1. C. Jency, **Saravanakumar Gurusamy**, and K. M. A. Kadher, "Life-Time Maximization of Wireless Sensor Network Using Jaya Algorithm," in 2019 IEEE International Conference on Clean Energy and Energy Efficient Electronics Circuit for Sustainable Development (INCCES), 2019. |**Scopus**|.

2. D. Ganesha Perumal, B. Subathra, G. Saravanakumar, and Seshadhri Srinivasan, "Extended Kalman Filter Based Path-Planning Algorithm for Autonomous Vehicles with I2V Communication," in IFAC-PapersOnLine, 2016. |**Scopus**|.

3. **Saravanakumar Gurusamy**, K. Valarmathi, M. Pallikonda Rajasekaran, Seshadhri Srinivasan, Willjuice M. Iruthayarajan, and Valentina E. Balas, "Dynamic State Transition Algorithm (DSTA) Based Tuning of Centralized PID Controller for the Distillation Column," in Springer International Conference on Soft Computing Systems (ICSCS), 2016. |**Scopus**|.

4. Seshadhri Srinivasan, Furio Buonopane, **Saravanakumar Gurusamy**, B. Subathra, and Srini Ramaswamy, "Modelling Time-Varying Delays in Networked Automation Systems with Heterogeneous Networks Using Machine Learning Techniques," in 2015 IEEE International Conference on Automation Science and Engineering (CASE), 2015. |S



5. Sreram Balasubramaniyan, B. Subathra, R. C. Hemesh, **Saravanakumar Gurusamy**, and Seshadhri Srinivasan, "On Simulating Processor Schedules and Network Protocols within CPS Using TrueTime," in 2015 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC), 2015. |**Scopus**|.
6. **Saravanakumar Gurusamy**, K. Valarmathi, M. Pallikonda Rajasekaran, Seshadhri Srinivasan, and K. A. Mohaideen, "State Transition Algorithm (STA) Based Tuning of Integer and Fractional-Order PID Controller for Benchmark System," in 2015 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC), 2015. |**Scopus**|.
7. D. Ganesha Perumal, **Saravanakumar Gurusamy**, B. Subathra, Seshadhri Srinivasan, and Srini Ramaswamy, "Nonlinear State Estimation Based Predictive Path-Planning Algorithm Using Infrastructure-to-Vehicle (I2V) Communication for Intelligent Vehicle," in Proceedings of the 2nd International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA), 2014. |**Scopus**|.
8. R. Umashankari, K. Valarmathi, and **Saravanakumar Gurusamy**, "Temperature Control of Greenhouse System Using Evolutionary Computation," in 2013 International Conference on Energy Efficient Technologies for Sustainability (ICEETS), 2013. |**Scopus**|.
9. M. Rajalakshmi, **Saravanakumar Gurusamy**, and C. Karthik, "Nonlinear Identification of pH Processes Using an NNARX Model," in Proceedings of the International Conference on Computing and Control Engineering (ICCCE), 2012.
10. S. Meenakshi and **Saravanakumar Gurusamy**, "Subspace Identification and Controller Design for a Distillation Column," in International Conference on Computing and Control Engineering (ICCCE), 2012.
11. K. Mohaideen Abdul Kadhar, M. Saravanan, and **Saravanakumar Gurusamy**, "Speed Control of Three-Phase Induction Motor Using a Digital Signal Processor (TMS320F2407)," in International Conference on Recent Advancements in Electrical Sciences (ICRAES), 2012.

VII. KEYNOTES / GUEST LECTURES / FDP/ WORKSHOP SESSIONS DELIVERED

- Keynote Address | International Conference on Artificial Intelligence & Digital Twin Technology, Sivakasi, India | 26, April 2023 | Topic: *Reinforcement Learning using Julia Language.*
- Guest Lecture | Virtual Instrumentation using LabVIEW at M.Kumarasamy college of Engineering | January 2013
- FDP Session | Quantum Computing – Research Perspective in Healthcare Applications | 16–21, December 2024
- Workshop session | Introduction to LabVIEW Programming at Kalasalingam University | 2 March, 2013.
- Guest Lecture | Fuzzy Optimization for Image Processing & Control System Applications Lecture | Sethu Institute of Technology, Madurai |3 December 2012.
- Workshop| One-Day Workshop on LabVIEW Programming | Center for Learning Technology| Kalasalingam University | 8 February 2012.

VIII. ACADEMIC LEADERSHIP & RESPONSIBILITIES

- IEEE Ethiopia Subsection – Secretary (2023–2027)
- Coordinated labs: Process Control, Industrial Automation, Measurement & Instrumentation
- Member: Center for Robotics and Artificial Intelligence (LUBAN)
- UoG, Ethiopia - Lab Erection
  - Measurement and Instrumentation Laboratory, Process Control Laboratory, Industrial Automation Laboratory, Robotics Center,
  - Advisory member for Robotic center of RoboSoccer Team - iCog Makers Initiative with iCogLabs, Ethiopia
- Curriculum Design, review and update
  - MSc in Instrumentation and Control Engineering
  - BSc Electrical and Electronics Technology
  - BSc Bio-Medical Engineering



- PG coordinator for MSc Electrical Automation and Control Technology Stream.
- NI-LabVIEW Academy Co-ordinator
- Placement Co-ordinator

VIII.-.A. Community Services Coordination

- Co-ordinated-Junior Chamber wing
- National Service Scheme (NSS) - Programme Officer
- Red Ribbon Club (RRC) - In Charge

IX. TECHNICAL EXPERTISE

- Software: LabVIEW, Multisim, Proteus, MATLAB, SciLab, Python, ROS
- Hardware: Arduino, Raspberry Pi, NI Devices, ADAM Modules
- Industrial Systems: PLC (AB, Siemens, ABB), DCS (ABB AC800F), SCADA, HMI

X. ADDITIONAL INFO

- Languages: Tamil, English, Basic Amharic

XI. REFERENCES

Dr. K Valarmathi — Professor and Head, PSR Engineering College, Sivakasi, India

Dr. Willjuice Iruthayarajan — Professor and Head, National Engineering College, India

Dr. Marimuthu Gajendran — Assistant Manager, Syrma SGS Technology, India

XII. DECLARATION

I hereby declare that all above-mentioned information is in accordance with fact or truth up to my knowledge and I bear the responsibilities for the correctness of the above mentioned particulars.

Sincerely,



Dr. Saravanakumar Gurusamy

XIII. APPENDICES

XIII.A. APPENDIX A - LIST OF COURSES & RELATED LABS TAUGHT

Subject Taught	Subject Code	Institution	Level of Teaching
Digital Control System	ICE5006	KARE	Postgraduate
Linear and Nonlinear System Theory	ICE5001	KARE	Postgraduate
System Identification and Adaptive Control	ICE5005	KARE	Postgraduate
Virtual Instrumentation	ICE6008	KARE	Postgraduate



Subject Taught	Subject Code	Institution	Level of Teaching
Adaptive Control Systems	EACT 631	FTI	Postgraduate
Advanced Process Control	EACT 531	FTI	Postgraduate
Digital Control System	EACT534	FTI	Postgraduate
Industrial Automation and Robotic	EACT536	FTI	Postgraduate
Intelligent Control	EACT 635	FTI	Postgraduate
Linear Control System	EACT 533	FTI	Postgraduate
Nonlinear Control	EACT 633	FTI	Postgraduate
Technology Research Methods	EACT 530	FTI	Postgraduate
Digital Control System	EIE410	KARE	Bachelor
Control System Design	ICE18R5002	KARE	Bachelor
Control Systems	EIE208	KARE	Bachelor
Electrical and Electronics Instrumentation	EIE18R172	KARE	Bachelor
Industrial Automation	EIE18R153	KARE	Bachelor
Instrumentation and Control in Petro-Chemical Industries	EIE18R305	KARE	Bachelor
Microprocessor and Microcontroller	EIE324	KARE	Bachelor
Network Analysis and Synthesis	EIE302	KARE	Bachelor
Process Control Laboratory	CHE491	KARE	Bachelor
Process Dynamics and Control	EIE306	KARE	Bachelor
Programmable Logic Controllers	EIE307	KARE	Bachelor
Robotics and Automation	EIE407	KARE	Bachelor
Virtual Instrumentation Laboratory	EIE481	KARE	Bachelor
Electrical Measurement and Instrumentation	ECEg4155	UOG	Bachelor
Industrial Automation	ECEg4332	UOG	Bachelor
Introduction to Robotics	ECEg5234	UOG	Bachelor
Process Control Fundamentals	ECEg5187	UOG	Bachelor

XIII.B. APPENDIX B - LIST OF PG THESIS SUPERVISED

S/N	Name of Student	Student ID	Thesis Title
1	SARAVANAN N		Robust Control of Kiln Temperature in Cement Industries
2	RESHMABEGUM H M		Multivariable System Identification
3	RAJALAKSHMI M		Nonlinear Identification of pH Process
4	MEENAKSHI S		Model Predictive Control of Distillation Column
5	RAMYA GANESAN		Nonlinear System Identification Using Wiener-Hammerstein Model
6	TITTO JACKSON A		Identification of Heat Exchanger using Neural Network Auto Regressive Exogenous Model
7	YILKAL AYELE		Comparison of Controller Performance for Vehicle Suspension System
8	ENDALE TSAGAYE YADETE		Design of Model Reference Adaptive Controller for Coupled Tank Process
9	KOANG YAK GENG		Design of Kinematic Controller for Robot Manipulator



S/N	Name of Student	Student ID	Thesis Title
10	ABRAHAM SIMON KANG		Embedded Remote Condition Monitoring System for Industrial Machinery
11	SAMUEL BEKELE		Design of Model Predictive Controller for Rotary Kiln in Cement Industry
12	WORKU MULUGETA		An Artificial Intelligent Approach for Medium-Term Load Forecasting in Debrebrihan Substation No.1
13	AYELIGN MARU		Design of Robust Controller for Type III Bridgeless CUK Converter
14	DESTA MERGIYA		Design of Feedback Linearization Controller with STA Tuned PID Controller for the Temperature Control of Continuous Stirred Tank Reactor
15	YAHUVENS BERIHUN		Design of ANFIS Controller for Mobile Robot Interrelated Industrial Application
16	KIDST G/MARYAM		Design of Continuous Time MPC for Rotary Kiln Process
17	SHIMELS CHEKOLE		Design of Event-Triggered PID Controller for Continuous Stirred Tank Heater (CSTH)
18	BELAY DESTA		Design of Inverse Dynamic Controller for 6Dof Robotic Manipulator
19	NATNAEL SHIFERAW BELETE		Multivariable Black-Box Modeling of Didactic Process (DL2314 Process Control Module)
20	MULUGETA TESFAMICHAEL		Performance Analysis of Automatic Controllers in Injera Baking Electric Mitad for Energy Efficiency
21	ZELALEM ADDIS		Optimal Tuning of Controller Parameters for Non-Square MIMO System using Intelligence Techniques
22	WELDEGEBRIEL BIRHANU		Design of an Active Fault-Tolerant Control System with Actuator and Sensor Faults for Attitude Control of Rigid Spacecraft
23	MASRESHA TIRFE HABTE		Design of an Improved PID Controller for Antilock Braking System (ABS) using Extremum Seeking Algorithm
24	ZENEBU AYALEW		Design and Simulation of Nonlinear Model Predictive Controller (NMPC) based Trajectory Tracking Controller For USV
25	OUSMAN ESSA		Performance Analysis of Radial Basis Function Neural Network based Model Predictive Control For Biomass Boiler Process
26	DEREJE LALOTO MADEBO		Tuning Two Degree of Freedom PID Controller using Multi-Objective Optimization for Temperature Control Of Injera Mitad
27	BELACHEW ABAY TEFERA		Trajectory Tracking Control of Three-Wheeled Omnidirectional Mobile Robot: Fuzzy Adaptive Sliding Mode Approach
28	SOLOMON MEKURIA		Performance Comparison of Fuzzy-PID and Model Reference Adaptive Control of Boiler in Steam Plant
29	ADERAJEW TIGABU		Design of Nonlinear Controller for Fermentation Process
30	MICHAEL TSEGAYE		Fuzzy PID Controller based Power Generation Efficiency Improvement on a Floating Solar Power Plant on Abay Dam
31	SAHLE TASEW		Design of Multivariable PI Controller for non-minimum phase Four Tank System using Iterative Feedback Algorithm
32	FIKRU DESALEGN		Design of Event-Triggered Control for Resource Usage Reduction in Waste Water Treatment Plants



S/N	Name of Student	Student ID	Thesis Title
33	FENTABIL DAMTE		Modeling and Control of Singularly Perturbed Fuel Cell-Fuel Processor System
34	HIWOT LAWAY		Robust Controller Design for Boiler Drum Water Level in the Sugar Mill using H-Infinity Method
35	TEWODROS KE-FELEGN		Implementation of Three Degrees of Freedom Robotic Arm using Robot Operating System (ROS)
36	TESFAYE HAB-TAMU NEGEWO		Design Active Disturbance Rejection Control of Gasifier Boiler in Thermal Process with Actuator Saturation Constraints
37	ABRAHALEY ALEMSAGED GE-BRESLASSIE		Learning-Based Model Predictive Controller (LB_MPC) for Heating, Ventilation and Air Conditioning (HVAC) System
38	DEJEN KIDU		Design and Analysis of QFT Controller for Decoupled Multivariable Boiler Turbine Unit with Uncertainty
39	TUMAY TEKA		Model Predictive PID Trajectory Control of Row Seed Sowing Autonomous Agricultural Robot
40	TEKESTE TESFAY MELAKI		Design of ANFIS Controller for Interleaved Boost Converter for Solar PV
41	SADIYA HUSEN AHMED		Design and Simulation of Nonlinear Model Predictive Controller (NMPC) for Indoor Temperature Control

XIII.C. APPENDIX C - LIST OF UG PROJECT GUIDANCE

S.No	Title	Academic Year	Name of the Students
1	WIRELESS MONITORING OF GREEN HOUSE SYSTEM	2010–11	KAUSHIK S MUTHU GANESH S NAMBI RAJAN S
2	A WAVELET BASED IMAGE FUSION OF CT AND MRI	2010–11	RAMYA.J RAMYA.M SAVEETHA.R
3	IMPLEMENTATION OF CPLD BASED DISTRIBUTED ARITHMETIC PID CONTROLLER	2010–11	THAMEEM UL ANSARI M VENKATESAN L GANESH S
4	AUTOMOBILE EVENT DATA RECORDER	2010–11	RAMKUMAR S SURESH BABU P
5	VIRTUAL INSTRUMENT FOR LEVEL SYSTEM IDENTIFICATION	2010–11	AARTHI P R BHANUMATHI P SARAVANA SUBHA S SUMITHRA N
6	WIRELESS IRRIGATION CONTROL SYSTEM	2010–11	SHRINIVASA S SESHATHRI R REHAN SHAREEF R
7	CONTROL OF GREEN HOUSE SYSTEM	2011–12	HAPPY HIRAN G MADHU KANNAN C MOHANRAJ M
8	PC BASED MONITORING SYSTEM FOR POWER TRANSFORMER	2011–12	SABARISH A D SANKARA NARAYANAN S SATHISH KUMAR M

S.No	Title	Academic Year	Name of the Students
9	AUTOMATION OF BOILER CONTROL SYSTEM USING DISTRIBUTED CONTROL SYSTEM	2011–12	BHARAGAVA SRINATHSAN G MAHESWARAN A
10	AUTOMATIC EXTRACTION OF BIOGAS & FERTILIZER FROM SOLID WASTE	2012–13	RAJKUMAR R MUTHU RAJU M MAHAMED NAZEEB ALI K A
11	MODELLING AND CONTROL OF PH NEUTRALIZATION PROCESS	2012–13	ARAVIND BALAJI M ASHOK KUMAR Y DHAMOTHRAN K
12	THREE ELEMENT BOILER LEVEL CONTROLLER USING PLC	2012–13	AMARANATH G AROCKIYA SANTHOSH RAJ M
13	AUTOMATIC RAILWAY GATE CONTROL	2015–16	Biruk Solomon Mohammed Yimam
14	DESIGN AND SIMULATION OF BATTERY CHARGING CIRCUIT USING SILICON CONTROLLED RECTIFIER AND PIC MICROCONTROLLER	2016–17	HAILIE SETARGIE MULUGETA FENTAHUN
15	DESIGN AND SIMULATION OF GSM BASED SAFE OVERLOAD CONTROLLING IN PUBLIC TRANSPORTATION	2016–17	GIRMA NUGUSE JEMAL KETEMA TEWABE NADIE ESKEZIYAW ALEMNEH MOHAMMED MOKONEN
16	DESIGN AND SIMULATION OF FUZZY LOGIC BASED AUTOMATIC WASHING MACHINE	2016–17	Alebel Tsegaye Mustefa Sadedin Yebeltale Kassaw Yigermal Chanie
17	DESIGN AND DEVELOPMENT OF FIRE MONITORING, ANNUNCIATION AND CONTROLLING SYSTEM	2016–17	Asrie Geremew Azazh Adisie Destaw Chanie Yirga Gashaye
18	DESIGN AND IMPLEMENT OF ARDUINO BASED SMART STICK FOR VISUALLY CHALLENGED PEOPLE	2017–18	Samuel Almineh Worku Yimer Daniel Wubet Habtamu Gashu
19	DESIGN AND DEVELOPMENT OF AUTONOMOUS CAR	2017–18	Dagmawi Fitsum Robel Kindu Yemiserach Abera Yohannes Alemayehu
20	DESIGN AND SIMULATION OF AUTOMATIC FIRE DETECTION AND CONTROL	2017–18	Amessas Admasu Birhanu Tulu Daniel Wubet Samuel Alemneh
21	DESIGN AND SIMULATION OF AUTOMATIC FIRE DETECTION AND CONTROL	2017–18	Birhanu Tulu Daniel Wubet Samuel Alemneh Amessas Admasu
22	DESIGN AND SIMULATION OF ROBOT OBSTACLE AVOIDANCE USING ROS AND GAZEBO	2017–18	Wubshet Ayalew Yayachew Mandefro Muluneh Chekol Mihretu Begashaw Amanuel Getnet

S.No	Title	Academic Year	Name of the Students
23	BLACK LINE TRACKING ROBOT	2017–18	Hiwot Dessie Lemlem Teferi Mastewale Alene Raymok Mustefa Sara Fantahun
24	PLC BASED AUTOMATIC FIRE EXTINGUISHER	2017–18	BIADGLGN TIGABU DIRES MELAKU EYAYEW GETU NETSANET TIRU

XIII.D. APPENDIX D : LIST OF WORKSHOP/FDP/STTP/SEMINAR/WEBINAR PARTICIPATION

S. No	Date(s)	Event/Activity	Organization/Institution	Role	Event Type
1	3–7 January 2025	Advances in Control, Estimation & Optimization for Cyber-Physical Systems (ACEOCPS-2025) - FDP	Dept. of Electrical Engineering, NIT Rourkela (co-sponsored by IEEE Rourkela Subsection)	Participant	FDP
2	16–21 December 2024	Control System Application Perspective and Aerospace Vehicles	Dept. of Electrical & Electronics Engineering, Mar Baselios Christian College of Engineering & Technology, Peermaade	Participant	FDP
3	June 2021	6-Week Internship on Internet of Things (IoT)	Enthu Technology Solutions India Pvt. Ltd.	Intern	Internship
4	12–13 September 2020	2-day National Level Online Program: Workshop on Raspberry Pi – A Practical Approach	NITK-STEP, NIT Karnataka, Surathkal (with Pantech E-Learning)	Participant	Workshop
5	1–5 June 2020	Five-Day National Level FDP on LATEX	Dept. of Humanities & Sciences, CMR Engineering College, Hyderabad (with IIT-Bombay Spoken Tutorial)	Participant	FDP
6	14–15 May 2020	Webinar on Arts of Writing Scientific Reports	Dept. of Electronics & Instrumentation Engineering, Velammal Engineering College	Participant	Webinar
7	8–9 September 2017	Advances & Success Stories of Robust & Adaptive Control - Workshop	Indian Institute of Science, Bengaluru / IFAC-ACDOS	Participant	Workshop
8	5–7 September 2015	Healthy World Conference 2015	School of Health Sciences & Research, JNTUK, Kakinada	Participant	Conference
9	July 2014	EYE-DIOTS workshop on Image Processing based Robotics	Excelsior Embedded Solutions	Participant	Workshop
10	28–29 March 2014	Workshop on Soft Computing Application in Digital Image Processing	Kalasalingam University / Scientific Computing Solutions, Chennai	Participant	Workshop

S. No	Date(s)	Event/Activity	Organization/Institution	Role	Event Type
11	27–28 February 2014	ROBOFEAST-2013 National Robotics Championship Workshop	Kalasalingam University / Revert Technology Pvt. Ltd.	Coordinator	Workshop
12	11 January 2014	Information Enabled Adaptive & Optimal Control under Uncertainty	Indian Institute of Science, Bangalore / ACDOS & IEEE CSS Bangalore	Participant	Seminar
13	31 December 2013	Tutorial: Data Based Analysis & Synthesis of Linear Systems	NIT Tiruchirappalli	Participant	Workshop
14	26–27 December 2013	Workshop on Model Predictive Control (by John Bagterp Jørgensen)	IIT Madras	Participant	Workshop
15	28–29 October 2013	Workshop on Control & Optimization in Energy Systems	IIT Madras / ACDOS, Bangalore	Participant	Workshop
16	3 September 2013	Workshop on Life Skill Management	Kalasalingam University (CLT)	Participant	Workshop
17	4–8 December 2012	Control System Design (CSD'2012) - STTP	IIST, Thiruvananthapuram	Participant	FDP/STTP
18	21 July 2012	National Seminar on Research Methodology	Kalasalingam University	Participant	Seminar
19	12–14 & 14–15 July/September 2012	NI LabVIEW Core 1 & 2 Course	National Instruments NI LabVIEW Academy	Participant	Course
20	18–19 February 2012	Art of Counseling Workshop	Kalasalingam University (CLT)	Participant	Workshop
21	16–17 December 2011	PID Controller Design & Advanced Process Control Workshop	Karpagam College of Engineering	Participant	Workshop
22	28 November – 3 December 2011	Orientation Training (NSS)	Avinashilingam University (NSS)	Participant	Training
23	10–11 November 2011	ACDOS Workshop on Applications of Estimation	NIT Trichy (NITT)	Participant	Workshop
24	17 September 2011	One-Day Workshop on LabVIEW Programming	Kalasalingam University (CLT)	Resource Person	Workshop
25	4–5 February 2011	Neural Network Approach for Image Processing Workshop	Kalasalingam University	Participant	Workshop
26	8–9 January 2010	ICRAES '10: Advancements in Electrical Sciences Conference	K.S.R. College of Engineering	Participant	Conference
27	1–6 June 2009	Evolutionary Optimization Algorithms - STTP	Thiagarajar College of Engineering	Participant	FDP/STTP



S. No	Date(s)	Event/Activity	Organization/Institution	Role	Event Type
28	28–29 March 2008	AMER'08: Biomedical Engineering Advancements Seminar	National Engineering College	Participant	Seminar
29	11–12 December 2004	Industry Institute Interaction Training	Lakshmi Ammal Polytechnic College	Participant	Training
30	13–15, October 2004	Industrial Automation Using PLC Workshop	National Engineering College	Participant	Workshop
31	22–23 January 2004	Industrial Safety Engineering (ISE 2004) Workshop	National Engineering College	Participant	Workshop
32	9–14 June 2003	Biomedical Equipment Training	Meenakshi Mission Hospital & Research Centre	Participant	Training

