PhD/M.Tech/B.Tech (Projects)/ Internship Project Students

Ph.D

Awarded

1. Ameya Anil Kesarkar – Investigating Limit Cycle Performance and Asymptotic Bode Behavior of Fractional Order Controllers (May 2015)
2. M.Vanidevi – Weighted Nuclear Norm Minimization Method for Massive MIMO Low Rank Channel Estimation Problem (March 2018)
3. Sathishkumar P – Fractional Order Controllers for Complex Valued Systems and System with Multiple Nonlinearities (November 2019)
4. Asha P Nair – Lyapunov Based Stable and Robust Adaptive Control Design for a Class of Space Transportation Systems (January 2023)
5. Resmi V L – Fractional Order Cardiovascular System Model with Baroreflex Control – An Optimization Approach (January 2024)
6. R.S.Mohankumar – Robust Fractional Order LQI Controller Design for Quadruple Tank Process and its Feasibility Study in Bond Graph Domain – An Optimization Approach (Jan 2025)

Ongoing (Regular)

1. Anjana K – Modeling of Physiological System (Aug 2022) – IIST Fellowship

Ongoing (Sponsored/External Fellowship)

1. Meera K – Development of Fractional Chaotic Observer For Secure Communication (Sep 2021) – IIT Palakkad Technology IHub Foundation Fellowship
2. Asir Nesa Dass N – Data Driven Model Prediction of Vibration Loads on Launch Vehicle Elements (July 2023) – ISRO Sponsored
3. Tanuja Abhijit Patki – Modeling Body Parameters for Bio-Instrumentation Needed in Human Space Missions (July 2024) – ISRO Sponsored\
4. K Eden Evans Samuel, 'Quantum Computing for Next Generation Sensor Arrays' (Jan 2025) – ISRO Sponsored

M.Tech

At Indian Institute of Space Science and Technology

1. Diya Susan Thomas – Fractional Order SIRV Model Over Networks (2025)
2. Anjitha Vijayakumar – Complex Coefficient Controller using Fuzzy for Complex Coefficient System (2024)
3. Prashant Raj Patro – Model Based Disease Diagnosis (2022)
4. Anupam Mishra – Model-Based Robust Estimation, Sensor Fault Detection & Diagnosis of Quadrotor (2021)
5. Krishna Kumar Madheshiya – Modeling and Control of 1-D Magnetic Needle (2021)
6. Munagala Sireesha – Control System Design for Reusable Launch Vehicle using Non-Linear Dynamic Inversion Method (2021)
7. Gulivindala Kishore – Optimal Controller Design for System with Hard Nonlinearities – Signal Processing Approach (2020)
8. Varre Premkiran – Health Monitoring , Diagnosis and Prognostics in Space (2020)
9. T N Ramdeep –Limit Cycle Prediction and its Suppression Using Higher Order Harmonics For System With Nonlinearity (2019)
10. Fasil Mohamed – Lyapunov Based Model Reference Adaptive Control for Satellite Launch Vehicle (2019)
11. Varsha Jena – Design and Analysis of Brushless DC Motor for Aerospace Applications (2019)
12. Rejitha Raveendran – Advanced Control Algorithms for Satellite Attitude Control (2017)
13. Deepa S Pai – Studies on an Adaptive Control Scheme for Plant with Separable Nonlinearity (2016)
14. Resmi V.L – Control for Magnetic Levitation System using Model Reference Adaptive Control (2016)
15. Kanapala Sujith – Linear Parameter Varying Integral State Feedback Controller for Nonlinear Systems (2015)
16. Geetu Maria- Dynamic Analysis and Active Vibration Control For A Two Storeyed Flexible Structure Building (2015)
17. Vineetha A – Application of Sequential Adaptive Fuzzy Inference System Algorithm For Real Time Systems (2013)
18. V.Santhosh – Blind Estimation of MIMO Channels Using Heuristic Technique (2012)

At Pondicherry Engineering College

1. G.Divya Charline – Controller Design and Implementation of High Performance Coupled-Inductor DC-DC Converter using AI Techniques. (2007)
2. R. Saraswathy Ramya – Modeling, Control and Fault Diagnosis of PMSG using AI Techniques. (2007)
3. S.Sandosh Kumar – Design and Implementation of Dahlin's Control for Active Power Filters. (2007)
4. D.Raja – Fault Identification and Control of Switched Reluctance Motor using Artificial Intelligence Techniques. (2006)

At Madras Institute of Technology

1. B.Raja Gopal Reddy – Active Identification and Control for a Class of Non-Linear Discrete Time Systems. (2002)
2. B.Makesh Kumar – Fuzzy Logic Control for Robotic Two Link Manipulator. (2002)

B.Tech

At Indian Institute of Space Science and Technology

1. Kondepudi Subhash - Fractional Order Filter Design for EMG Signal processing (2023)
2. Bhyrapuram Sai Vinay Prasad Naik - Mathematical modeling of Lung (2023)
3. Sanghpriy Gautam - Modeling and Control of 1-D Magnetic Needle (2022)
4. Pathlavath Ganesh - Cardio Vascular System and Left Carotid Model (2022)
5. R Sai Aryan - Modelling and Control of Respiratory Systems (2022)
6. R.G.Sriya - Baroreflex Control for Cardiovascular System (2021)
7. M.Rohith Bala - Control system design for a class of problem-Frequency Domain (2021)
8. Chaitanya- Controller System Design for a Class of Problem-Time Domain (2021)
9. K Shailesha - Reinforcement Learning based Adaptive Sensing for an ECG signal used in Heart Disease Diagnosis (2020)
10. Palaparthi Alekhya - Heart Abnormalities and Correction Strategy using pacemaker-cardioverter-defibrillator Mode (2020)
11. Krishna Kant - Diagnosis of Various Cardiovascular Diseases (2020)
12. Debajyoti Chakrabarti - Advanced Control Algorithms For Satellite Attitude Maneuver (2019)
13. Greeshma battula - Modeling and control of Micro actuator system (2019)
14. Kunthuru Naveen Kumar - Model Order Reduction for Discrete Time Interval Systems Using Gradient Flow Method (2019)
15. Hitesh Kumar Naik - Robust Modelling and Analysis using Bond Graph Theory (2019)
16. Daksh Dhiman - Controller Design For Magnetic Levitation System (2017)
17. Karthik D V - Modified Sequential Adaptive Fuzzy Inference System for Nonlinear System Identification (2017)
18. Sai Teja Ayyalasomayajula - Improved Sequential Adaptive Fuzzy Inference System Based Model Identification for Non-linear Systems (2015)
19. Shikha Kapoor - Eigenvalue and Eigenvector Based Flexible Structure Analysis (2014)
20. Abhijit Roy - Hardware Realization of synchronized blinking using Nature-inspired Firefly Algorithm (2014)
21. Tanisha Bhatia - Fractional Order Controller and PID Controller for Buck Converter on FPGA (2013)
22. Gopikrishnan S - P I^alpha D^Beta Controller Design for Cart Inverted Pendulum (2012)
23. Burle Venkata Satya Shravan and Vaddavalli Dilip Kumar - Fractional Order Synthesis Using Artificial Bee Colony Algorithm and Other Heuristic Techniques (2012)
24. Pratik Barve and Harshit Gole - Optimized Fractional PID for Maglev System (2012)
25. S.Habib Mohamed, Mr.M.Venkata Subramanian, Mr.G.S. Sree Sabarish and Mr.G. Esakki Rajan - Pipeline Crawling leakage/Block detection LEGO Robots using Labview (2012)

At Pondicherry Engineering College

1. N. ArunKumar and KG. Sandeep Kumar - CHESSBOT – A Chess Playing Robot (2007)
2. Noorjahan.M, Prasanna.S, Sathish Kumar.V and Vijay Kumar Perla - Fuzzy Modeling and Control of Permanent Magnet Synchronous Motor (2006)

At Madras Institute of Technology

1. R.Sathiyamoorthy, A.Viswanath and K.Yasodha - PC based Parallel Robot Arm Control with Feedback Approach. (2004)

2. S.Ramesh and R.V. Ranjan – Optimal Tuning of PID Parameters using Genetic Algorithm.(2002)
3. PC based pH Measurement Systems. (2003)
4. R.Prabhu Jude, B.Seshadri and R.G.S.Aparna – PC based Parallel Control of Robot Arms. (2003)

Long Term Internship (January- June 2025)

1. Priyanshu Mishra – Designing of Secure Image Encryption Method using Hybrid Quantum-Chaotic Keys and Randomness Validation via NIST and Diehardez, Chhattisgarh Swami Vivekanand Technical University, Bhilai.
2. Daneshwar Prasad – Advanced cardiovascular disease detection and prediction using ECG dataset, Chandra Chhattisgarh Swami Vivekanand Technical University, Bhilai.
3. Aryan Kutty – Analysis of CNN-ANFIS Model for Cardiovascular System Vital Parameter Monitoring, Chhattisgarh Swami Vivekanand Technical University, Bhilai.

Internship (S-Summer; W-Winter)

At Indian Institute of Space Science and Technology

1. Kritish Nagyal - Advanced AES Image Encryption Using a Chaotic Key and S-box Generator, Central University of Jammu (2025)
2. Vasanth C - HYBRID E91-CHAOS: A Novel Quantum Approach for Secure Communications, Annamalai University (2025)
3. Nandita Panicker - One-Dimensional Quantum Walk-Driven Shannon Entropy Filtered Semi-Quantum Key Distribution Framework Based on Enhanced BKM2007 Protocol, Government Engineering College, Kozhikode (2025)
4. Anjana V - Prediction of heart disease relying on ECG features with machine learning, College of Engineering, Trivandrum (2025)
5. Muhammed Yasir CK - Model based disease diagnosis using machine learning, College of Engineering Adoor (2025)
6. Shantanu Saha - Biological Modelling of Heart using Equivalent Electrical System (S-2020)
7. Kakumanu Sai Ram - System Modelling and Analysis Using Bond Graph Method (S-2018)
8. S.Ganesh and Sarath Sankar.S - Design, analysis and optimisation of a BLDC Machine (S and W - 2016)
9. Sai Teja Ayyalasomayajula - Design and Analysis of a Permanent Magnet Synchronous Motor Based on Finite Element Analysis (S-2014)
10. Tanisha Bhatia - Complimentary Root Locus of Fractional Systems (S-2012)
11. Tushar Jaiswal - Fractional Order Controller and Stability Analysis (S-2012)
12. Rajnish Kumar Yadav- Controller Design of Inverted Pendulum using Root Locus and Frequency Response Methods (W-2010)
13. Pavan Kumar M, Shailender Kumar SP and VIshwa Teja G - Chaotic based Cryptography using Impulsive Synchronization For Secure Communication System (S-2010)
14. Gagan Agrawal and K. Kiran Sagar - Model Reduction of Interval Systems using Chebyshev Polynomials (S-2009)
15. Gaurav Bholotia, Rajeev Ranjan and Sunil Kumar - Fuzzy Modeling for Twin Rotor MIMO Systems (TRMS) (W-2009)

At Pondicherry Engineering College

1. Arunkumar N and Dennis Thomas - Model Reduction for Uncertain Systems (S-2006)

At Madras Institute of Technology

1. Barath. S - PC based Parallel Control of Robotic Manipulators (S-2003)
2. K.Chandra Priya and R.Divyaa - Direct Truncation of Routh Table based Model Reduction for Uncertain Systems (W-2002)
3. V.Gnana Priya and S.Kalaivani - Neural Network based Fault Diagnosis for Steam Turbine Regenerative Systems (S-2002)
4. S.Ramesh Kumar and J.Zamer E Alam -Simple Overshoot Suppressed PID Controller (S-2002)
5. G.L.Narayanan and K.Balaji - Temperature Compensation for Reference Electrode in pH Measurement (S-2002)