Detailed Bio-data

Name : Dr. Subrat Kumar Swain

Contact Number (Personal): 9556662987

Date of Birth: 04/01/1983 (4th January 1983)

Present Address: Flat No- C2/402, C. I. Heights, Danish Kunj, Kolar Road, Bhopal, 462042

Permanent Address: Flat No- 19, Subhasthiti Apartments, Bagbudi Village, Chhend Colony, Rourkela, Odisha, 769009

Education:

Degree and Major	College/University	Dates of enrollment	Class/ Division	% marks or GPA
Ph.D. in Intelligent Systems and Control Engineering	School of Electronic and Electrical Engineering, Kyungpook National University, Daegu, South Korea	March 2019 – May 2024	1st	3.95 out of 4.3 (91.86%)
Master of Science (MS) in Computer Engineering	Arizona State University, USA	Aug. 2010 to May 2013	1st	3.31 out of 4.00 (82.75%)
Master of Science (MS) in Electrical Engineering	Wayne State University, Michigan, USA	Jan. 2008 to Dec. 2009	1st	3.66 out of 4.00 (91.50%)
B.Tech in Electrical Engineering	College of Engineering and Technology, Bhubaneswar/BPUT, Odisha	July 2001 to May 2005	1st (Hons.)	78.60%

Work Experience:

1. Assistant Professor in the Department of Electrical Engineering

Maulana Azad National Institute of Technology (MANIT) Bhopal

October 2025 – Till Now (Continuing)

Nature of Duties: Teaching and Research

2. Assistant Professor in the Department of Electrical and Electronics Engineering

Birla Institute of Technology Mesra, Ranchi

April 2015 – October 2025

Nature of Duties: Teaching and Research

3. Capgemini Software Private India Limited, Pune

June 2005 – December 2007

Nature of Duties: Software Development and Testing

Conference Publications

[1] Abhishek Thakur , Ankit Kumar, Sudhansu Kumar Mishra, **Subrat Kumar Swain** , Subhendu Kumar Behera, "Optimizing Lateral Motion Control of an Autonomous Ground Vehicle using Modified Particle Swarm Optimization with Model Predictive Controller" 2nd International Conference on Computer, Electronics, Electrical Engineering and their Applications (IC2E3-2024), June 6-7, National Institute of Technology, Uttarakhand, India.

[2] R. Kumar, S. K. Mishra, **S. K. Swain** and D. K. Mohanta, "Prediction Based Reliability Assessment of Solar Integrated System," 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, 10 – 13 December, 2023, pp. 1-6.

[3] B. Kumar, **S. K. Swain**, S. K. Mishra and Y. K. Singh, "Artificial Neural Network-Based Sliding Mode Position Tracking Control for Maglev System," 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, 2023, pp. 1-6, DOI: 10.1109/STPEC59253.2023.10430849.

[4] **S. K. Swain**, D. Narzary, J. J. Rath and K. C. Veluvolu, "Robust Shared Lateral Control for Autonomous Vehicles," 2021 International Conference on Artificial Intelligence in Information and Communication (ICAIIC), Jeju Island, Korea (South), 2021, pp. 394-400, DOI: 10.1109/ICAIIC51459.2021.9415260.

[5] Avirup Kumar Gupta, **Subrat Kumar Swain**, Sudhansu Kumar Mishra, Tamal Datta, Sarbani Chakraborty, "Improved Turning Angle Calculation for an Unmanned Ground Vehicle", In Proc IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India,30-31 March, 2019.

[6] Tamal Datta, Sudhansu Kumar Mishra, **Subrat Kumar Swain**, Avirup Gupta, "Real Time Detection and Tracking of a Model Car using Kalman Filter", In Proc IEEE 2nd International Conference On Innovations In Electronics, Signal Processing and Communication (IESC), Shilong, India, 1-2 March,2019.

[7] C. Mishra, **S. K. Swain**, S. Kumar Mishra and S. K. Yadav, "Fractional Order Sliding Mode Controller for the Twin Rotor MIMO System," 2019 International Conference on Intelligent Computing and Control Systems (ICCS), Madurai, India, 2019, pp. 662-667, doi: 10.1109/ICCS45141.2019.9065331.

[8] Debdoot Sain, **Subrat Kumar Swain**, Sudhansu Kumar Mishra, Real Time Implementation of Optimized I-PD Controller for the Magnetic Levitation System Using Jaya Algorithm, Third IFAC

International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS), 18th-22nd February 2018, Hyderabad, India.

[9] Sirsendu Shekhar Mishra, Sudhansu Kumar Mishra, **Subrat Kumar Swain**, Coefficient Diagram Method (CDM) based PID Controller Design for Magnetic Lavitation System. IEEE International Conference on "Intelligent Techniques in Control, Optimization and Signal Processing". 23rd -25th March,2017, Tamil Nadu, India.

[10] Tapas Kumar, Sudhansu Kumar Mishra, **Subrat Kumar Swain**, Design of Fractional Order Controllers Satisfying Provided Gain and Phase Margin for Magnetic Lavitation System. IEEE International Conference on "Intelligent Techniques in Control, Optimization and Signal Processing". 23rd -25th March, 2017, Tamil Nadu,India.

[11] Mithilesh Rout, **Subrat Kumar Swain**, Sudhansu Kumar Mishra, "PID Controller Design for Cruise Control System using Genetic Algorithm", IEEE, International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, DMI College of Engineering, Chennai, Tamilnadu, March 3-5, 2016.

[12] Debdoot Sain, **Subrat Kumar Swain**, Sudhansu Kumar Mishra, Soumyajit Dutta, "Robust Set-Point Weighted PID Controller Design using Genetic Algorithm for Electric Furnace Temperature Control System", XIII International conference on Control Instrumentation System Conference (CISCON-2016), 2016, MIT, Manipal, India.

Member of Professional Society: IEEE

Awards and Honors

1) Best PhD thesis Gold Award for the topic 'Shared Control for Intelligent Vehicles using Game Theory and Reinforcement Learning' at KPIT Shodh Awards in Pune, March 2025.

2) Gold award winner in the student paper presentation titled, ' A Framework for Evaluating Incident Management Strategies on Freeways' held in 2010 ITS Michigan Annual Meeting and Exposition, Dearborn, Michigan, USA, May 2010.

3) Nominated in the Third Place of the first Student Decision World Contest organized by Expert Choice organization.