

Profile Page



Name : Dr Amit Kumar Singh

Designation : Assistant Professor Grade-i

Department : Instrumentation & Control Engg.

Qualification : Ph.D. Electrical Engineering (Indian Institute of Technology, Roorkee)
M. Tech.(Gold Medalist) Electrical Engineering (National Institute of Technology, Kurukshetra)
B.Tech. Electronics & Instrumentation Engineering (Uttar Pradesh Technical University, Lucknow)

Address : Department of Instrumentation & Control Engineering
National Institute of Technology, Jalandhar
Jalandhar, Panjab -

Email : Singhak@nitj.ac.in

Research Interests :

Control System, Process Control & Instrumentation, Application of Soft Computing Techniques to Chemical Applications, Model Predictive Control, Renewable Energy

Other Profile Links :

Google Scholar Link :

Amit Kumar Singh [Click Here](#)

Journal Publications :

Year	Journal	Publication
2023	Recent Advances in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore.	Chauhan, Y., Singh, A.K., Veer, K., "Comparative Performance Analysis of Different Membership Functions on Fuzzy Logic-Controlled Solar Tracking System"
2022	Materials Today: Proceedings(Elsevier)	Amit Kumar Singh, Yamini Chauhan, Navneet Sharma, "Comparative performance analysis of intelligent controllers for solar tracking system"
2022	Materials Today: Proceedings(Elsevier)	Noor Shiza, Amit Kumar Singh, "A Study on control strategies utilized for performance enhancement of antilock braking system"
2022	Materials Today: Proceedings(Elsevier)	Shubham Gupta and Amit Kumar Singh
2022	Optimization of Industrial Systems, 321-334, 2022	Saty Prakash Yadav, Amit Kumar Singh, "Design of Different Controllers of Cruise Control System on Inclined Plane"

2022	Recent Advances in Operations Management Applications. Lecture Notes in Mechanical Engineering. Springer, Singapore.	Kumar, V., Singh, A.K. , "Design of Fuzzy Controller for Blood Glucose Level"
2021	Operations Management and Data Analytics Modelling	Shubham Gupta, Amit Kumar Singh, "Identification of Most Significant Parameter in Estimation of Solar Irradiance at Any Location A Review"
2020	International Journal of Intelligent Systems Technologies and Applications	Nitish, Amit Kumar Singh, "automatic detection, classification and area calculation of brain tumor in mri using wavelet transform and svm classifier"
2017	Vol. 12(1),	Amit kumar singh, Barjeev tyagi and Vishal kumar, "ANFIS based Control Scheme for Binary Distillation Column", Chemical Product and Process Modeling (CPPM)(A De-Gruyter Journal),
2016	9(41),pp. 367-371.	Sachin Mishra, Sanjay Kumar Sinha and Amit Kumar Singh, "Re-Investigating the Trends in the Field of Control for Energy Efficient Buildings", International Journal of Control Theory and Applications(IJCTA),
2014	vol. 9, no. 1, pp. 71-87	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, "Classical and Neural Network–Based Approach of Model Predictive Control for Binary Continuous Distillation Column" Chemical Product and Process Modeling,
2013	vol. 59, no. 2, pp. 167-175,	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, "Application of Feed Forward and Recurrent Neural Network Topologies for the Modeling and Identification of Binary Distillation Column" in IETE Journal of Research,
2013	vol. 8, no. 1, pp. 53-70,	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, "First Principle Modeling and Neural Network–Based Empirical Modeling with Experimental Validation of Binary Distillation Column " Chemical Product and Process Modeling,
2013	vol 15, no. 4, pp. 47-57	Amit Kumar Singh, Barjeev Tyagi, and Vishal Kumar, "Application of Neural Network based Control Strategies to Binary Distillation Column" Control Engineering and Applied Informatics,

Conference Publications :

Year	Conference	Publication
2020	International Conference on Electrical and Electronics Engineering (ICE3-2020) held at MMMUT Gorakhpur (UP)	Satyaprakash, Amit kumar Singh, "Mathematical Modelling and control of Cruise Control System on the Inclined Plane "
2019	International Conference on Recent Developments in Control, Automation and Power Engineering", RDCAPE 2019	Nitish, Amit kumar Singh, "Condition Monitoring and Fault Diagnosis Techniques of Electric Machines"
2019	International Conference on Recent Developments in Control, Automation and Power Engineering", RDCAPE 2019	Abhishek Dixit, Amit kumar Singh, "Islanding Detection and prevention by using Facts Power Filter"
2017	Springer International Conference on Microelectronics, Computing & Communication Systems (MCCS-2017) at ARTTC, Ranchi.	Chitrita saha and Amit Kumar Singh, "Review on Fault Tolerant Control(FTC) and Fault Detection and Isolation(FDI)
2016	IEEE Seventh International Conference on Power Electronics (IICPE-2016), Thapar university.	IMohammad Ali Khan, S. Bharath, Sachin mishra and Amit Kumar Singh, 'Intelligent control of fixed capacitor-thyristor controlled reactor for power quality improvement"

2016	IEEE Seventh International Conference on Power Electronics (IICPE-2016), Thapar university.	Mohd. Afshan Ansari, Amit Kumar Singh, and Sachin Mishra, “Modeling and Simulation of Hybrid Electric Vehicles for Speed Control Using Intelligent Techniques”
2016	Springer International Conference on Intelligent Communication, Control and Devices ICICCD2016	Amit Kumar singh, H.P. Singh and Sachin mishra “Validation of ANN based Model for Binary Distillation Column”
2011	International Conference on Advances in Computing and Artificial Intelligence (ACAI-2011), pp.166-169	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, “Fuzzy Rule-Based Controller for Binary Distillation Column”
2011	Recent Advances in Intelligent Computational Systems (RAICS-2011), 2011 IEEE, pp.515-519 (2011).	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, “Comparative performance analysis of Fuzzy Logic Controller for the Composition control of Binary Distillation Column”
2011	IEEE Nirma University International Conference on Engineering (NUICONE-2011), pp.1-6 (2011).	Amit Kumar Singh, Barjeev Tyagi, Vishal Kumar, “ANN Controller for Binary Distillation Column-A Marquardt-Levenberg approach ”
2009	TICE-09,Oct. 29-30, Thapar University,	Amit Kumar Singh & Vikram Chopra ,” Robust H infinity control of time delay system with time varying uncertainty”,

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book Chapter	Performance Analysis of CCS on Inclined Plane using Fuzzy-PID Controller	Bentham Science	Saty Prakash yadav, Amit Kumar Singh	978-981-5036-10-7	2022
Book Chapter	Different Approaches of Classification of Brain Tumor in MRI Using Gabor Filters for Feature Extraction	Advances in Intelligent Systems and Computing. Springer, Singapore	Nitish, Amit Kumar Singh and R K Singla	978-981-15-0751-9	2020
Book Chapter	A Review Article on Fault-Tolerant Control (FTC) and Fault Detection Isolation (FDI) Schemes of Wind Turbines	Lecture Notes in Electrical Engineering,. Springer, Singapore	Saha C., Singh Amit Kumar	978-981-10-8234-4	2019

Book Chapter	Validation of ANN-Based Model for Binary Distillation Column.	In: Singh R., Choudhury S. (eds) Proceeding of International Conference on Intelligent Communication, Control and Devices. Advances in Intelligent Systems and Computing, vol 479. Springer, Singapore	Singh A.K., Singh H.P., Sachin Mishra		2017
--------------	---	--	---------------------------------------	--	------

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	3rd International Conference on Soft Computing: Theories and Applications 2018	Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, India	21-12-2018	23-12-2018	Organizing Secretary
STC	International	Optimization and Control Design Techniques Innovations and Challenges OCDT-2020	Dr. B. R Ambedkar NIT Jalandhar	17-09-2020	21-09-2020	Coordinator
STC	International	Industry 4.0- Industrial Automation Solutions & Applications IASA-2020	Dr. B. R. Ambedkar NIT Jalandhar (online)	21-09-2020	25-09-2020	Coordinator
STC	International	Exploratory Applications of Control and Instrumentation (EACI-2020)	Dr. B. R. Ambedkar National Institute of Technology Jalandhar (Online Mode)	26-09-2020	30-09-2020	Convener
STC	National	IoT Opportunities, issues and challenges for control and biomedical applications	Dr. B R Ambedkar NIT Jalandhar	06-10-2021	10-10-2021	Coordinator
STC	National	Organised a Self-sponsored Five-day FDP/STC Recent Trends and Challenges in Instrumentation and Control (RTCIC-2021)	Dr. B R Ambedkar NIT, Jalandhar	20-10-2021	24-10-2021	Convener

Professional Affiliations :

Designation	Organization
-------------	--------------

Assistant Professor (Jan 2018 to till date)	Dr. B. R. Ambedkar NIT Jalandhar
Assistant Professor (July 2015 to Jan 2018: 2.5 Years)	Amity University Noida
Assistant Professor (July 2014 to July 2015: 1 year)	ABES Engineering College Ghaziabad

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Shubham Gupta	Soft Computing Application in Controller Design	Undergoing	2019	
Nitish	Modeling and Control of Active Suspension System for Railway Vehicle	Undergoing	2018	

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Noor Shiza	Optimized Tuning of PID Controller for Enhancement of ABS Performance	Completed	2022	
Rishikesh Pathak	Modeling and Controller Design for a Single Room HVAC System	Completed	2022	
Yamini chauhan	Design of ANN based Intelligent Controller for a Single Axis Solar Tracking System	Completed	2021	
Satyaprakash	Mathematical Modeling and controller design for cruise control system on inclined plane	Completed	2020	
Vijay kumar	Neuro Fuzzy Based Control for Blood Glucose Level in Human Body	Completed	2020	
Abhishek Dixit	Islanding Detection and Prevention by Using Fact Power Filter	Completed	2019	
Chitrita Saha	Design of Advanced Control Strategies for Wind Turbines	Completed	2017	
Afshan Ansari	Modeling and Simulation of Hybrid Electric Vehicles for Speed Control Using Intelligent Techniques	Completed	2016	

Patents :

Name	Reg./Ref. No.	Date of Award/Filing	Organization	Status
Intelligent Controlling System for Vehicle	202011039270	11/09/2020	Indian Patent Organization	Under Examination

Award and Honours :

Title	Activity	Given by	Year
MHRD PhD Fellowship	For PhD	MHRD	2010-14
Gold Medal	For Highest CGPA	NIT Kurukshetra	2009
MHRD GATE Fellowship	For MTech	MHRD	2007-09