

Profile Page



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Department : Instrumentation & Control Engg.

Qualification : Ph.D. Instrumentation and Control Engineering (Delhi University, Delhi)
M.Tech Process Control (Under Instrumentation and Control Engineering) (Delhi University, Delhi)
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Research Interests :

My research interests mainly includes Control System, Renewable Energy, Modeling and Simulation, Intelligent & Nonlinear Control.

Other Profile Links :

Google Scholar Link :

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Scopus Scholar ID [Click Here](#)

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Researcher ID [Click Here](#)

Vidawan ID [Click Here](#)

Research Gate [Click Here](#)

Journal Publications :

Year	Journal	Publication
2023	ISA Transactions, Elsevier, vol. 132, pp. 387–401.	PK Pathak, AK Yadav, PA Alvi, A Shastri, “BWOA assisted PIDF-(1+I) controller for intelligent load frequency management of standalone micro-grid,”.

2023	Journal of Computational and Nonlinear Dynamics, ASME Transactions, vol. 18, no.1, pp. 011005-1-11.	M Ramesh, AK Yadav, PK Pathak, "Artificial gorilla troops optimizer for frequency regulation of wind contributed microgrid system".
2023	ISA Transactions	Pawan Kumar Pathak, Anil Kumar Yadav, "Design of optimal cascade control approach for LFM of inter-connected power system"
2023	Expert Systems, Wiley	Pawan Kumar Pathak, Anil Kumar Yadav, A. Shastri, "BWOA based metaheuristic approach for uncertain nonlinear milling CNC machine system".
2023	Optik, Elsevier	Rahul Gupta, Anil Kumar Yadav, SK Jha, PK Pathak, "Long term estimation of global horizontal irradiance using machine learning algorithms".
2023	International Journal of Hydrogen Energy, Elsevier.	PK Pathak, AK Yadav, S Padmanaban, "Transition Toward Emission-Free Energy Systems by 2050: Potential Role of Hydrogen".
2022	Neural Computing and Applications, Springer, vol. 34, no.1, pp. 171-209.	PK Pathak, AK Yadav and PA Alvi, "A state-of-the-art review on shading mitigation techniques in solar photovoltaics via meta-heuristic approach".
2022	IET Generation, Transmission & Distribution, vol. 16, no. 4, pp. 776-791.	PK Pathak, S Padmanaban, AK Yadav, PA Alvi, B Khan, "Modified incremental conductance MPPT algorithm for SPV based grid-tied and stand-alone system,".
2022	Journal of Engineering Research	PK Pathak, AK Yadav and PA Alvi, "Reduced oscillations based perturb and observe solar maximum power point tracking scheme to enhance efficacy and speed of a photovoltaic system".
2022	IET Generation, Transmission & Distribution, vol. 16, no. 11, pp. 2111-2139.	PK Pathak, AK Yadav, S Padmanaban, PA Alvi, I Kamwa, "Fuel cell-based topologies and multi-input DC-DC power converters for hybrid electric vehicles: A comprehensive review,".
2022	IEEE Access, vol. 10, pp. 92828-92842.	PK Pathak, AK Yadav, S Padmanaban, I Kamwa, "Fractional Cascade LFC for Distributed Energy Sources via Advanced Optimization Technique under High Renewable Shares".
2022	Electric Power Components and Systems, Taylor & Francis, vol. 50, no. 14-15, pp. 751-761.	PK Pathak, AK Yadav, S Padmanaban, PA Alvi, "Design of Robust Multi-Rating Battery Charger for Charging Station of Electric Vehicles via Solar PV System".
2022	IET Renewable Power Generation	PK Pathak, AK Yadav, S Padmanaban, B Twala, I Kamwa, "Design of smart battery charging circuit via PV for hybrid electric vehicle".
2022	International Journal of Information Technology, Springer, vol. 14, no. 5, pp.2567-2574.	RR Kumar, AK Yadav, and M Ramesh, "Hybrid PID plus LQR based frequency regulation approach for the renewable sources based standalone microgrid,".
2021	International Journal of Information Technology, Springer, vol. 13, no. 1, pp. 109-114.	AK Yadav, P Saxena, P Gaur, and PK Pathak, "Self-Tuning Fuzzy PID Controller for Servo Control of Hard Disk Drive with Time Delay,".
2021	ISA Transactions, Elsevier, vol. 112, pp. 234-250.	M Ramesh, AK Yadav, PK Pathak, "Intelligent adaptive LFC via power flow management of integrated standalone micro-grid system".
2021	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor & Francis.	M Ramesh, AK Yadav, PK Pathak, "An Extensive Review on Load Frequency Control of Solar-Wind based Hybrid Renewable Energy Systems".
2020	Journal Européen des Systèmes Automatisés, IIETA, vol. 53, no. 5, pp. 661-670.	AK Yadav, PK Pathak, P Gaur, "Robust Control and Stability Analysis of Computerized Numeric Controlled Machine Tool under Parametric Uncertainty".
2020	The Arabian Journal for Science and Engineering, Springer, vol. 45, no. 3, pp. 2065-2080.	AK Yadav and P Gaur, "Modified IMC Technique for Nonlinear Uncertain Milling CNC Machine Tool System,".

2020	Journal of Solar Energy Engineering, ASME Transactions, vol. 142, no. 4, pp. 040801-26.	PK Pathak, AK Yadav and PA Alvi, "Advanced solar MPPT techniques under uniform and non-uniform irradiance: A comprehensive review".
2019	Journal of The Institution of Engineers (India): Series B, Springer, vol. 100, no. 2, pp. 169-177.	AK Yadav, PK Pathak, SV Sah and P Gaur, "Sliding Mode based Fuzzy Model Reference Adaptive Control Technique for an Unstable System,".
2019	Solar Energy, Elsevier, vol. 178, pp. 79–89.	PK Pathak and AK Yadav, "Design of battery charging circuit through intelligent MPPT using SPV system".
2017	The Arabian Journal for Science and Engineering, Springer, vol. 42, no. 7, pp. 2981–2991.	AK Yadav and P Gaur, "Speed Control of an Uncertain Heavy-Duty Vehicle using Improved IMC Technique,".
2016	Journal of Electrical Systems, vol. 12, no. 2, pp. 258-277.	AK Yadav, P Gaur and P Saxena, "Robust Stability Analysis of PMSM with Parametric Uncertainty using Kharitonov Theorem,".
2016	The Arabian Journal for Science and Engineering, Springer, vol. 41, no. 9, pp. 3749-3760.	AK Yadav and P Gaur, "An Optimized and Improved STF-PID Speed Control of Throttle Con-trolled HEV".
2016	Journal of Computational and Nonlinear Dynamics, ASME Transactions, vol.11, no. 6, pp. 061013-7.	AK Yadav and P Gaur, "Improved Self-Tuning Fuzzy Proportional–Integral Derivative Versus Fuzzy-Adaptive Proportional–Integral–Derivative for Speed Control of Nonlinear Hybrid Electric Vehicles,".
2016	Defence Science Journal, vol. 66, no. 6, pp. 665-672.	AK Yadav and P Gaur, "Neuro-Fuzzy based Improved IMC for Speed Control of Nonlinear Heavy-Duty Vehicles,".
2015	International Journal of Powertrains, Inderscience, vol. 4, no. 2, pp. 106-125.	AK Yadav and P Gaur, "Robust MRAS Speed Control of Hybrid Electric Vehicle using Sliding-Mode and Fuzzy-Logic Adaptation Mechanism".
2015	ISA Transactions, Elsevier, vol. 56, no. 3, pp. 288-298.	AK Yadav and P Gaur, "Intelligent Modified Internal Model Control for Speed Control of Non-linear Uncertain Heavy-Duty Vehicles,".
2014	Journal of Control Engineering and Applied Informatics, vol. 16, no. 1, pp. 70-79.	Shyama Kant Jha, Anil Kumar Yadav, Purna Gaur, J.R.P. Gupta and Harish Parthasarthy, "Robust and Optimal Control Analysis of Sun Seeker System,"
2014	Sadhana, Springer, vol. 39, no. 4, pp. 765-783.	AK Yadav and P Gaur, "AI based Adaptive Control and Design of Autopilot System for Non-linear UAV,".
2014	Nonlinear Dynamics, Springer, vol. 76, no. 1, pp. 305-321.	AK Yadav and P Gaur, "Robust Adaptive Speed Control of Uncertain Hybrid Electric Vehicle using Electronic Throttle Control with Varying Road Grade".
2013	World Review of Science, Technology and Sustainable Development, Inderscience, vol. 10, no. 1/2/3, pp. 56-77.	AK Yadav and P Gaur, "Comparative Analysis of Modern control and AI based control for maintaining constant Ambient Temperature,".
2011	Journal of Power Electronics, vol. 11, no. 4, pp. 393-400.	Anil Kumar Yadav, Purna Gaur, Shyama Kant Jha, J.R.P. Gupta and A.P. Mittal, "Optimal Speed Control of Hybrid Electric Vehicles".

Conference Publications :

Year	Conference	Publication
2022	International Conference on Power Electronics, Drives and Energy Systems (PEDES-2022)	Sneha V Sah, Vivek Prakash, PK Pathak, and Anil Kumar Yadav, "Fractional Order AGC Design for Power Systems via Artificial Gorilla Troops Optimizer
2022	IEEE International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET-2022)	Ravi Kumar, Anil Kumar Yadav, Imran Ahamad, Maloth Ramesh, "Comparative Analysis of Battery Charging Circuits using Solar PV System

2022	IEEE Delhi Section Conference (DELCON),	Maloth Ramesh, Anil Kumar Yadav, "Wind Contributed Load Frequency Control Scheme for Standalone Microgrid Using Grey Wolf Optimization,"
2022	IEEE Delhi Section Conference (DELCON)	Rahul Gupta, Anil Kumar Yadav, Shyama Kant Jha, Pawan Kumar Pathak, "Time Series Forecasting of Solar Power Generation Using Facebook Prophet and XG Boost,"

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
International	Energy Conversion: Methods, Technology and Future Directions: An Extended Study of Frequency Sup-ported-Wind Energy Conversion System,".	Nova Science	M Ramesh, AK Yadav, R Kumar, PK Pathak	979-8-886 97-370-9	2022
International	Control of Standalone Microgrid: SM-and FL-based MRALFC schemes for solar-wind based Micro-Grid,"	Academic Press, Elsevier	PK Pathak, AK Yadav	978012823 0220	2021
International	Electrical and Electronic Devices, Circuits, and Materials: Technological Challenges and Solutions: Study of the Most Commonly Utilized Maximum Power Point (MPP) Tracking (MPPT) Schemes for SPV Systems".	Wiley Scrivener	PK Pathak, AK Yadav and PA Alvi	978-1-119-75036-9	2021

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
PI	Research Project	Power Flow Management in Solar-Wind-B ased Micro-Grid Using AI-Based Control Techniques	Himachal Pradesh Council for Science Technology and Environment (HIMCOST E), Shimla.	28/04/2021	27/04/2023	360000	Ongoing	Dr. Rajan Kumar

Professional Affiliations :

Designation	Organization
Senior Member (96304036)	IEEE
Member (M-1679877)	Institution of Engineers

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
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Maloth Ramesh	Investigation on Optimal Load Frequency Control of Hybrid Renewable Energy System	Submitted	2023	NA
Pawan Kumar Pathak	An Extensive Study on Intelligent Control of Renewable Energy System	Awarded	2021	Dr. PA Alvi (Supervisor)
Rahul Gupta	Investigation of Sustainable Energy System	Ongoing	2020	Prof. SK Jha (Supervisor)
Praveen Kumar	Power Flow Management in Microgrid System	Ongoing	2020	Prof. SK Jha (Supervisor)

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
An Advanced Machine Learning Approach for A Grid-Integrated Photovoltaic System	202211023783A	29/04/2022	Indian Patent	Published