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Profiles

LinkedIn
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Web of Science ResearcherID
AAQ-2832-2020

Education

2019
Ph.D.
MNNIT Allahabad, Prayagraj, India

2013
M.Tech (Power Electronics & ASIC Design) – 8.9 CPI
MNNIT Allahabad, Prayagraj, India

2007
B.Tech (ECE) – 71.42%
BIET Jhansi/UPTU

2000
Intermediate – 76.60%
HIC Jaunpur

1998
High School – 76.16%
HIC Jaunpur

Language

Hindi, English

Dr. Akhilesh Kumar Gupta

(Assistant Professor (EEE Department))

To obtain a role within an organization where I can apply my adept instructional abilities, enthusiasm for helping students grow, and my commitment to creating a positive and enjoyable learning space. This is all aimed at helping students succeed in their studies and develop a lifelong passion for learning.

Experience

06th Mar 2025 – Till Now
Shri Ramswaroop Memorial University (SRMU), Lucknow
Assistant Professor

10th Jan 2019 – 25th Feb 2025
BNCET Lucknow
Assistant Professor
IIC Convenor
NIRF Coordinator
Convenor Literary Committee
Coordinator –Virtual Lab Cell
Member IQAC
Departmental Time Table Convener
Incharge Training & Placement Cell

Jan 2016 – Dec 2018
MNNIT Allahabad, Prayagraj, India
Senior Research Fellow

Jan 2014 – Dec 2016
MNNIT Allahabad, Prayagraj, India
Junior Research Fellow

August 2008 – April 2011
VIET, Dadri
Assistant Professor, ETD
Time Table Incharge
Coordinator of Verilog training Program

Skills

MATLAB/Simulink, Orcad/Pspice, Python, C, C++

Subject Taught

Power Electronics, Digital Electronics, ADC, DSP, Communication Engineering, Basic Signals & Systems, Signals & Systems, Digital Communication, Control System etc.

Achievements

Secured **Gold medal** in M.Tech, 2013.
Qualified in **GATE-2018** in **ECE.**

Qualified in **GATE-2014** in **ECE.**
Qualified in **GATE-2013** in **EE.**
Qualified in **GATE-2011** in **ECE.**
Qualified in **GATE-2010** in **ECE.**
Qualified in **GATE-2007** in **ECE.**
Meta-Reviewer and Reviewer of SCES-2024
Reviewer of SCES-2020.
Reviewer of UPCON-2022.

Project/Thesis

1. **Ph.D. Thesis**
   "Optimized Power Harvesting and Controller Design for Power Electronic Converters used in Wind Energy Conversion"
   The desirable attributes for an efficient MPPT algorithm is fast tracking speed, reduced oscillating power at maximum power point and absence of the need for customization of the system model with ageing. The Jaya optimization and big bang-big crunch optimization (BBBC) algorithms are proposed to obtain maximum power point rapidly.
2. **M.Tech Thesis**
   "Power Flow Control of Grid Connected Wound Rotor Synchronous Generator based Wind Energy Conversion System"
   The method proposed in this thesis is useful to minimize the reactive power demand in generator almost equal to zero. In this thesis, full converter topology has been used with wound rotor synchronous generator (WRSG).
3. **B. Tech. Project: "JPEG Image Compression using MATLAB"**

Publications

(a) Books

1. **Dr. Dr. Akhilesh Kumar Gupta**, Saurabh Kr. Bajpai, Sushil Kr. Paswan, "संचार अभियांत्रिकी के सिद्धांत" ***Notion Press***, 2023
2. **Dr. Dr. Akhilesh Kumar Gupta**, "Analog And Digital Communication: Extensive Question Bank With Solutions For Better Understanding" ***Amazon Kindle Edition***, 2023.
3. **Dr. Akhilesh Kumar Gupta**, "Communication Engineering", ***IIFRAD Publisher***, 2022.
4. **Dr. Akhilesh Kumar Gupta**, "Analog and Digital Communication", ***IIFRAD Publisher***, 2021.

(b) International Journals

1. Chhabindra Nath Singh, Shekhar Gehlaut, **Akhilesh Kumar Gupta, "**Marine Predators Algorithm Based Stable Approximants Of Linear-Time Invariant Continuous-Time Systems", ***Journal of Namibian Studies***, vol. 35, issue 1, pp. 3881-3904, 2023. **(SCOPUS)**
2. Tejavath Veerendar, Deepak Kumar & **Akhilesh Kumar Gupta, "**Quasi-Oppositional African Vultures Optimization-Based PIλDn Plus Piλ Controller for Frequency Control of an Interlinked Hybrid Power System**"**, ***Electric Power Components and Systems***, vol. 51, issue 13, pp. 1219-1239, 2023, doi:10.1080/15325008.2023.2191249. **(SCI)**
3. Chhabindra Nath Singh, Deepak Kumar, Paulson Samuel, **Akhilesh Kumar Gupta, "**Slime mould optimization-based approximants of large-scale linear-time invariant continuous-time systems with assured stability", ***Circuits, Systems & Signal Processing***, vol. 42, pp. 1419-1437, 2022**,** https://doi.org/10.1007/s00034-022-02153-w. **(SCI)**
4. **Akhilesh Kr. Gupta**, Deepak Kumar and Paulson Samuel," Order Reduction of Linear Time Invariant System using Eigen Permutation and Jaya Optimization," ***Engineering Optimization***, vol. 51, issue 9, pp. 1626- 1643, 2019. **(SCI)**

5. **Akhilesh K. Gupta**, Deepak Kumar and Paulson Samuel," A Mixed Method for Order Reduction of Linear Time Invariant Systems using Big Bang-Big Crunch And Eigen Spectrum Algorithms," ***International Journal of Automation and Control***, vol. 13, issue 2, pp. 158-175, 2019. **(Scopus)**
6. **Akhilesh K. Gupta**, Deepak Kumar and Paulson Samuel," A Meta Heuristic Cuckoo Search and Eigen permutation Approach for Model Order Reduction," ***Sadhana,*** vol. 43, issue 65, pp. 1-11, May 2018. **(SCI)**
7. **Akhilesh Kumar Gupta**, Deepak Kumar and Paulson Samuel, "Order Reduction of Continuous LTI Systems using Harmony Search Optimization with retention of dominant poles*,"* ***International Journal of Control Theory and Application***, vol. 10, issue 6, pp. 269-277, 2017. **(Scopus)**
8. Ayushi Sachan, **Akhilesh Kr. Gupta**, Paulson Samuel, "A Comprehensive Review of MPPT Algorithms Employed in Wind Energy Conversion Systems," ***Journal of Green Engineering,*** vol. 6, issue 4, pp. 385-402, 2016. **(Scopus)**

(c) Book Chapter

1. Satendra Kumar Singh Kushwaha, Satyprakash, **Akhilesh Kumar Gupta**, Akbar Ahmad, Bandi Mallikarjuna Reddy, Narendra Kumar Ch, "Techno-Economic Issues of Grid Connected Large Photovoltaic Plants of Smart City Prayagraj to the EV charging station: A Case Study (A Case Study of 5 MW Photovoltaic Power Plant at Prayagraj)," ***In Smart Charging Solutions for Hybrid and Electric Vehicles (eds S. Sachan, P. Sanjeevi kumar and S. Deb).***, 2022, https://doi.org/10.1002/9781119771739.ch17
2. **Akhilesh K. Gupta**, Paulson Samuel and Deepak Kumar," Speed Control of PMSM Drive using Jaya Optimization," in ***Intelligent Computing Techniques for Smart Energy Systems, Lecture Notes in Electrical Engineering,*** vol. 607, pp. 247-256, Springer, Singapore, 2020.
3. **Akhilesh K. Gupta**, Paulson Samuel and Deepak Kumar," Jaya Optimization based PID Controller for Z-Source Inverter," in ***Intelligent Computing Techniques for Smart Energy Systems, Lecture Notes in Electrical Engineering***, vol. 607, pp. 257-267 Springer, Singapore, 2020.
4. **Akhilesh Gupta**, Chhabindra Singh, Deepak Kumar and Paulson Samuel," Modified Eigen Permutation Based Model Simplification of LTI Systems using Evolutionary Algorithm," ***International conference on advances in systems, control and computing***, pp.41-49, 2020. https://doi.org/10.1007/978-981-15-8045-1_5
5. Chhabindra Singh, **Akhilesh Gupta**, Deepak Kumar and Paulson Samuel," A Mixed Approach for Model Reduction Using Differential Evolution and Eigen Permutation," ***International conference on advances in systems, control and computing***, pp.51-59, 2020. https://doi.org/10.1007/978-981-15-8045-1_6

(d) International Conferences

1. Sandeep Gupta, **Akhilesh Kr. Gupta**, Sushil Kumar and Jitendra Kr. Srivastava, "Enhancing Buck Converter Dynamics through Jaya-Optimized PI Control," ***3rd International Conference on Advances in Signal Processing & Communication Engineering* (*ICASPACE-2025*)**, Hyderabad, Telangana, India 2025.
2. S. Gehlaut, D. Kumar, C. N. Singh and **A. K. Gupta**, "Jaya optimization-based approximation of LTI systems using stability equations," ***2023 International Conference on Power, Instrumentation, Energy and Control (PIECON)***, Aligarh, India, 2023, pp. 1-5, doi: 10.1109/PIECON56912.2023.10085851.
3. C. N. Singh, D. Kumar, P. Samuel, **A. K. Gupta** and V. Sreeram, "Colliding bodies optimization-based approximants of linear-time invariant continuous-time systems," ***2022 Australian & New Zealand Control Conference (ANZCC),*** 2022, pp. 46-50, doi: 10.1109/ANZCC56036.2022.9966957.
4. Chhabindra Singh, Deepak Kumar, Paulson Samuel and **Akhilesh Gupta**," Approximation of Commensurate Fractional-order systems using Colliding bodies optimization," ***The 13th Asian Control Conference (ASCC 2022)***, 2022.
5. Chhabindra Nath Singh, **Akhilesh Kumar Gupta**, Deepak Kumar and Paulson Samuel "Improved Pole Clustering based Simplification of Complex Systems using Big Bang-

Big Crunch Optimization", presented in ***5th IEEE Students' conference on Engineering and Systems SCES 2019***, MNNIT Allahabad.

6. Lalit Kumar, Rajendra Prasad, **Akhilesh Kumar Gupta**, Deepak Kumar, Manoj Kumar and Bhola Jha, "Modified Least-Square based Model Reduction using Time Moments and Markov Parameters," *2019* ***IEEE Region 10 Symposium (TENSYMP)***, Kolkata, India, 2019, pp. 441-446.
7. Chhabindra Nath Singh, **Akhilesh Kumar Gupta**, Deepak Kumar and Paulson Samuel ,"Fuzzy C-means based model simplification using Jaya optimization algorithm," ***2018 2nd IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES),*** Delhi, India, 2018, pp. 881-885
8. **Akhilesh Kumar Gupta**, Mallikarjuna Reddy Bandi, Deepak Kumar and Paulson Samuel, "BBBC based Optimization of PI Controller Parameters for Buck Converter," in ***2017 Innovations in Power and Advanced Computing Technologies (i-PACT)***, Vellore, 2017, pp. 1-6.
9. **Akhilesh Kumar Gupta**, Deepak Kumar and Paulson Samuel, "Order Reduction of Continuous LTI Systems using Harmony Search Optimization with retention of dominant poles*,"* in Proc. of ***2nd International Conference on Sustainable Computing Techniques in Engineering, Science and Management***, SCESM, Goa, 2017.
10. **Akhilesh K. Gupta**, Paulson Samuel, and Deepak Kumar," A State of Art Review and Challenges with Impedance Networks Topologies," in ***2016 IEEE 7th Power India International Conference (PIICON)***, Bikaner, 2016, pp. 1-6.
11. Akbar Ahmad, **Akhilesh K. Gupta**, and Paulson Samuel. "Embedded System Design for Digital Control of Single Phase Z-Source Inverter Using FPGA." in ***2014 14th International Conference on Environment and Electrical Engineering,*** Krakow, 2014, pp. 402-407.
12. **Akhilesh Kr. Gupta**, Akbar Ahmad and Paulson Samuel "HDL CoSimulation of Single Phase Z-Source Inverter" *Proc. of* ***2nd IEEE Students'conference on Engineering and Systems SCES 2013***, MNNIT Allahabad, 2013.
13. Abul Hasnat , **Akhilesh k. Gupta** and Akbar Ahmad, "Real and Reactive Power Control of PMSG Based Wind Energy Conversion System with CSI Inverter", in Proc. of *2013* ***International Conference on Control, Computing, Communication and Materials*** **(ICCCCM)**, **Allahabad, India**
14. **Akhilesh Kr. Gupta**, Akbar Ahmad "Co-Simulation of generic power converter using MATLAB and Modelsim", *Proc. of* ***1st IEEE Students' conference on Engineering and Systems SCES 2012***, MNNIT Allahabad, India, pp 100-103, 2012.

(e) National Conferences

1. **Akhilesh Kr. Gupta**, Jitendra Kr. Srivastava, Alok Kumar, Sushil Kumar, "Maximum Power Point Tracking (MPPT) for Solar Photovoltaic (PV) Systems: A Comprehensive Review," in Seminar Proc. of ***All India Seminar on Green Rebewable Electronics for Environmental Nurturing and Sustainability*** **(*GREENS*)** organised by The Institution of Engineers (INDIA) and IET Lucknow, 2025.
2. **Akhilesh Kumar Gupta**, Himanshu Bhushan, Paulson Samuel, "Generator topologies with power electronics converters for a wind energy conversion system: A review", ***National conference on Recent trends in energy systems (NCRTES - 2013),*** KNIT Sultanpur, 5th and 6th April 2013

FDPs/STCs

1. Attended two weeks of online FDP on **"Recent Trends in Robotics"** jointly organized by Electronics and ICT Academics at IIT Roorkee, MNIT Jaipur, NIT Patna and IITDM Jabalpur during July 04-15, 2022 under the **"Scheme of financial assistance for setting up of Electronics and ICT Academics",** of the MeitY, Govt. of India.
2. Attended one week of online STC on **"Modeling and Simulation of Dynamical Systems (MSDS-2021)"** organized by the Department of Electrical Engineering, MNNIT Allahabad from Sep 27 – Oct 01, 2021.

3. Attended one week of online International FDP on **"LabVIEW & Real-Time Acquisition"** under the Centre of Excellence at National Instruments Innovation Centre, ECED, ITS Engineering College, Greater Noida from Aug 03 – Aug 07, 2020.
4. Attended one week of AICTE Training and Learning (ATAL) online FDP on **"Power Electronics applications in Machine Drives and Power system"** at NIT Mizoram, from Dec 01 – Dec 05, 2020.
5. Attended the one-week STC on **"Advances in Power Technologies (APT-2018)" jointly** organized by the Department of Electrical Engineering, MNNIT Allahabad and Department of Electrical Engineering, KNIT Sultanpur sponsored by TEQIP-III from Sep 10 – Sep. 14, 2018.
6. Attended the one-week STC on **"Electric Power Quality: Analysis and Improvement (EPQAI)"** organized by the Department of Electrical Engineering, MNNIT Allahabad from Jan 21 – Jan 25, 2015.
7. Attended the one-week STC on **"Power Conversion of Renewable Resources (PCRER)"** organized by the Department of Electrical Engineering, MNNIT Allahabad from Jan 29 – Feb. 03, 2015.
8. Attended two weeks of FDP organized by TBI-KIET Ghaziabad during January 09-20, 2009 sponsored by the Department of Science & Technology, Govt. of India.

References

Prof. Paulson Samuel	**Dr. Deepak Kumar**	**Prof. C. N. Singh**
Professor	Associate Professor	Head of Department
Dept. of Electrical Engg.	Dept. of Electrical Engg.	Dept. of Electrical Engg.
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Date: 31/05/2025

Place: Lucknow **(Dr. Akhilesh Kumar Gupta)**