Dr. Rajveer Singh, Associate Professor
Department of Electrical Engineering,
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Dr. Rajveer Singh completed his B.Sc. Engg. in Electrical Engineering from Department of Electrical Engineering, Jamia Millia Islamia University, New Delhi in 1996, M.Tech. in Process Control Division of Instrumentation and Control Engineering, Netaji Shubhash Institute of Technology New Delhi (Delhi University) in 2002, Ph.D. from Jamia Millia Islamia (A Central University), New Delhi, India in 2016 in the area of Faults Analysis in Distribution Power Systems.

Dr. Rajveer Singh is presently working as Associate Professor in Department of Electrical Engineering, Faculty of Engineering and Technology, Jamia Millia Islamia, New Delhi, India since November 2006. Earlier he had worked as Senior Lecturer with the Dr. K.N. Modi, Institute of Engineering and Technology, Modinagar affiliated U P Technical University Lucknow. He has teaching, research and industry experience of more than nineteen years. Presently he is taking subjects at undergraduate and post graduate levels in the area of Basics of Electrical Engineering, Electrical Measurement Systems, Utilization of Electrical Energy, Power Station Practice, Renewable Energy, Power System Analysis etc.

Dr. Rajveer Singh has published/presented more than 55 papers in various peer reviewed **International/ National conferences, Transactions and Journals including MDPI, IEEE, IET, Elsevier, Taylor & Francis, Willey and Springer etc**. His current research interest includes Faults Analysis in Distribution Electrical Power Systems, Wind and Solar Energy systems, Renewable Energy Sources and Electric Vehicles.

Dr. Rajveer Singh has already guided 7 Ph.D. students and others are in continuation, and more than 30 M. Tech. students completed their Dissertation work.

View Full Profile

Professional Qualification

- **Ph. D.** 2016, from Department of Electrical Engineering, Jamia Millia Islamia (A Central University), New Delhi, India.
- **Title of the Ph.D. Thesis**: Fault Identification in Power Systems using Soft Computing Techniques.
- **M.Tech** (Process Control, Instrumentation and Control Division), 2002, from Netaji Shubhash Institute of Technology (NSIT, New Delhi), Delhi University with first division.
- **B.Sc. Engineering** (Electrical Engineering) Year 1996 from Department of Electrical Engineering with first division.

Teaching Experience

- 01 November, 2006 – Till date working as Associate Professor in the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi-110025.

- 31st July, 2003 – 18th October, 2006 worked as Sr. Lecturer in the Department of Electrical Engineering, Dr. K. N. Modi Institute of Engineering and Technology, Modinagar, U. P. Technical University, Lucknow.

- 01st Aug, 2001- 31st June 2002, worked as Lecturer Maharaja Surajmal Institute, Janakpuri, New Delhi.

Administrative Responsibilities

- Training and Placement coordinator of the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi., Year2006-2008 and Year 2024 to till date.

- Member Departmental Technical-cum-Sub Purchase committee, 2020-2023 and 2024to till date.

- Member Departmental Board of Studies (BoS), 2006 to till date.

- Convener Departmental Research Committee (DRC), 2020 - 2023.

- Asstt. Superintendentof Exams B.Tech.& B.E., 2019-2020.

- Member of the verification officer, Faculty of Engineering and Technology, JMI, for the Admission in B.Tech., M. Tech.&Ph.D. admissions, 2015, 2016, 2017, 2018, 2020, 2021, 2022, 2023, 2024 to till date.

- Member of Screening Committee for Contractual & Guest faculty 2017, 2018, 2023, 2024 to till date.

- Convener Sub-Committee for signing of MoUs with Industries, Indian and foreign Universities/Institutes.

- Member students sports committee year 2017 - 2023.

- Student advisor and CBCS coordinator for B.Tech. Programme.

Departmental Responsibilities

- CBCS coordinator of M.Tech. (CIS) for the session 2015-2016, 2016-2017, 2017-2018, Jamia Millia Islamia, New Delhi.

- Coordinator, Instrumentation and Control Group in Course revision workshop for NBA preparation held in Department of Electrical Engineering, Jamia Millia Islamia,7-8 Feb, 2017.

- In-charge Attendance B. Tech. and M.Tech., 2007-2013.

- Member of the organizing committee, IEEE international conference INDICON December 2015 held in New Delhi India.

- Member of the organizing committee, National conference on Emerging Trends in Electrical and Electronics Engineering (ETEEE-2015), Department of Electrical Engineering, Jamia Millia Islamia, 2015.

- Member of the organizing committee and subject group expert Instrumentation and control in Curriculum Revision Workshop of B.Tech and M.Tech courses December 3-4 2012, Department of Electrical Engineering, Jamia Millia Islamia, New Delhi.

- A.B.C. (Academic bank of Credits) Coordinator since 2023 to till date.

Ph.D. Thesis Supervised

Name of Students	Title of the Ph.D. Thesis	Status

Rajeev Kumar	Power System Stability Enhancement by Soft Computing Based Optimization Techniques	Awarded
Kashif Javed	Development of Smart Interface Scheme for SPV Systems	Awarded
Sudhir Kumar Singh	Determination of Impact of Inverter interface Distributed Generation (IIDG) on Power System Performance	Awarded
Abhishek Kumar Gupta	Modelling and Analysis of Photovoltaic Generation System under Different Fault Conditions	Submitted
Mukesh Pushkarna	Integration of DFIG based WECS to distribution system	Awarded
Naresh Kumar	Power Quality Issues and Solutions in Power System with High Penetrations of Renewable Energy Sources	Awarded
Rajesh Kumar	Performance Improvement of a Distribution System Integrated to WECS	Submitted

S. No.	Title of Industrial Project (with specific period)	Agency	Period	Grant/Amount Mobilized (Rs. Lakhs)/ Consultancy Fees	Whether you are the Main/co-consultant	Status Ongoing/ Completed
1.	Vetting of the E & M documents of IPS 1, 4, 5 and MPS for the Bulandshahr Sewerage Scheme Part-3, 2020.	LC infra Projects Pvt. Ltd., Prahladnagar Cross road, Ahmadabad, 380015.	2020	Rs. 25000/-	Main	Yes

Total amount for Vetting of Electrical items for three projects is Rs 248600/.

Research Publications

International/National Journals

1. Rajeev Kumar, Sourav Diwania, Rajveer Singh, Haroon Ashfaq, Pavan Khetrapal and Sheetal Singh, "An intelligent Hybrid Wind–PV farm as a static compensator for overall stability and control of multimachine power system" ***ISA Transactions, Elsevier***, vol. 123, pp. 286-302, April 2022, [**SCIE, IF: 6.3]**.

2. Rajeev Kumar, Rajveer Singh, Haroon Ashfaq, Sudhir Kumar Singh and Manoj Badoni, "Power system stability by damping and control of Sub-synchronous torsional oscillations using whale optimization algorithm based Type-2 wind turbines" ***ISA Transactions, Elsevier***, vol. 108, pp. 240-256, Feb. 2021, [**SCIE, IF: 6.30]**.

3. Bharti, KM Puja, Haroon Ashfaq, Rajeev Kumar, and **Rajveer Singh**. 2024. "Designing a Bidirectional Power Flow Control Mechanism for Integrated EVs in PV-Based Grid Systems Supporting Onboard AC Charging" ***MDPI, Sustainability*** 16, no. 20: 8791. https://doi.org/10.3390/su16208791 , October 2024 **[ESCI, IF: 3.60]**

4. Rajeev Kumar, Rajveer Singh and Haroon Ashfaq, "Stability Enhancement of induction generator–based series compensated wind power plants by alleviating sub synchronous torsional oscillations using BFOA-optimal controller tuned STATCOM, "***Wind Energy, Wiley,*** vol. 23, Issue 9, pp. 1846–1867, 2020, [**SCIE, IF: 4.0]**.

5. Rajeev Kumar, Rajveer Singh and Haroon Ashfaq, "Stability enhancement of multi-machine power systems using Ant colony optimization-based static Synchronous Compensator". ***Computers and Electrical Engineering, Elsevier***, vol. 83, pp. 1-17, May 2020, [**SCIE, IF: 4.0]**.

6. Singh, S.K.; Singh, R.; Ashfaq, H.; Sharma, S.K.; Sharma, G.; Bokoro, P.N. Super-Twisting Algorithm-Based Virtual Synchronous Generator in Inverter Interfaced Distributed Generation (IIDG). ***Energies, MDPI 2022***, *15*, 5890. **[SCIE IF 3.0].**

7. Kashif Javed, Haroon Ashfaq, and Rajveer Singh, "A new simple MPPT algorithm to track MPP under partial shading for solar photovoltaic systems, ***International Journal of Green Energy, Taylor & Francis***, vol.-17, Issue-1, pp. 48-61, Nov.2019, [**SCIE, IF: 3.40]**.

8. Kashif Javed, Haroon Ashfaq, Rajveer Singh, S.M. Suhail Hussain and Taha Selim Ustun, "Design and Performance Analysis of a Stand-alone PV System with Hybrid Energy Storage for Rural India, **Electronics, *MDPI,*** vol. 8, Issue-9, , pp. 1-16, Sept. 2019, [**SCIE, IF: 2.60]**.

9. Singh, S.K., Singh, R., Ashfaq, H. *et al.* "Enhanced Protection coordination for Inverter Interfaced Distributed Generation (IIDG) with a robust multi-loop controller" has been published in ***Electric Power Components and Systems, Taylor & Francis*** on 09 March 2023. **[SCIE IF 1.90].**

10. Singh, S.K., Singh, R., Ashfaq, H. et al. Virtual Inertia Emulation of Inverter Interfaced Distributed Generation (IIDG) for Dynamic Frequency Stability & Damping Enhancement Through BFOA Tuned Optimal Controller. ***Arabia Journal of Science & Engg. Springer*** *(2021).*https://doi.org/10.1007/s13369-021-06121-5, [**SCIE, IF: 2.60]**.

11. Singh, S.K., Singh, R., Ashfaq, H. et al. Virtual Synchronous Machine Using Ant Colony Optimization in Inverter Interfaced Distributed Generation (IIDG). ***Journal of Electrical Engineering & Technology, Springer***. 18, 167–179, 15 August, 2022. https://doi.org/10.1007/s42835-022-01198-w. **[SCIE, IF 1.60]**

12. Kashif Javed, Haroon Ashfaq, and Rajveer Singh, "An Improved MPPT Algorithm to Minimize Transient and Steady State Oscillation Conditions for Small SPV Systems," International Journal of Renewable Energy Development (IJRED), vol.-7, Issue-no. 3 (2018), pp. 191-197, Oct. 2018. [**ESCI, IF: 2.50].**

13. Kashif Javed, Haroon Ashfaq, and Rajveer Singh, "Analysis and Sizing of hybrid Energy Storage System (HESS) Topologies for Solar Photovoltaic Applications", ***International Journal of Power and Energy Systems, Acta Press***, vol. 39, Issue-3, pp. 1-10, 2019, **ESCI**.

14. Kashif Javed, Haroon Ashfaq, and Rajveer Singh, "Optimized Load Profile & Cost Analysis of StandalonePhotovoltaic System for Rural PowerApplications in Indian Scenario," *Smart Science, Taylor & Francis*, vol. 06, issue 03, pp. 245-255, May 2018. **ESCI**.

15. Majid Jamil, Sanjeev Kumar Sharma and Rajveer Singh, "Fault detection and classification in electrical power transmission system using artificial neural network,"***Springer Plus***, pp. 1-13, Jul. 2015.

16. Majid Jamil, Rajveer Singh and Sanjeev Kumar Sharma, "Fault Identification in electrical power distribution system using combined discrete wavelet transform and fuzzy logic," Journal of Electrical Systems and Information Technology, ***Elsevier, Science Direct,*** vol. 2, pp. 257–267, Sept.2015.

17. Gupta, A.K., Singh, R. & Kumar, S. I–V Characteristics-Based Shading Detection Technique for PV Applications. Trans Indian Natl. Acad. Eng. 8, 607–615 (2023). https://doi.org/10.1007/s41403-023-00419-6. August 2023.**[UGCCare].**

18. Abhishek Kumar Gupta, Rajveer Singh & Sanjiv Kumar, "A simplified approach to detect and diagnose the faults in PV array electricity generation system" *Indian Journal of Engineering & Materials Sciences*, Vol. 31, June 2024, pp. 450-458 DOI: 10.56042/ijems.v31i3.4463.[**SCIE].**

19. Abhishek Kumar Gupta, Rajveer Singh & Sanjiv Kumar, "DC SIDE FAULT DETECTION AND CHARACTERIZATION IN PV ARRAY BY INTRODUCING THE ELECTRICAL FAULT PARAMETERS" International Journal of Innovations & Research Analysis (IJIRA) ISSN :2583-0295, Volume 03, No. 04(I), October- December, 2023, pp 39-56.

20. Majid Jamil, Rajveer Singh and S. K. Sharma "High Impedance Fault Detection in Electrical Power Feeder by Wavelet and GNN", International *Journal of Engineering and Applied Sciences*, Volume-2, Issue-3, pp. 6-11, March 2015, ISSN: 2394-3661.

21. H.Ashfaq, Mohammad Saood and Rajveer Singh, "Autonomous Micro-Hydro Power System for Distribution Generation: A Power Quality Analysis," *Technical Research Organization India*, vol 2, issue 9, pp. 1-6, Feb. 2015, Online ISSN: 2394-0697 Print ISSN: 2393-8374.

22. Rajveer Singh, "Fault Identification and Classification in Transmission Line by ANN Technique Using Levenberg-Marquardt Algorithms," *International Journal of Advance Engineering and Research Development (IJAERD)*, vol. 4, issue 11, pp. Nov. 2017.ISSN: 2348-6406.

23. Rajveer Singh, "Speed Control of DC motor and its Application in Identification of the object using ANN," *International Journal of Advance Engineering and Research Development*, vol. 4, issue 12, pp. Dec. 2017. ISSN: 2348-6406.

24. Rajveer Singh, Manish Kumar and Haroon Ashfaq, "An integrated solar photovoltaic and dynamic voltage restorer forload voltage compensation, *International Journal of Electrical Engineering & Technology (IJEET), IAEME Publication*, vol. 9, Issue 5,pp. 52–63, Sept.-Oct. 2018.

25. Rajveer Singh, Purnesh Rao and Haroon Ashfaq, "Power Quality Improvement of Wecs Using Energy Storage System Under Fault Condition,"*International Journal of Applied Engineering Research,* vol.-13, Number 20, pp. 14787-14792, 2018.

26. Rajveer Singh. "Fault Classification in Power Distribution System by ANFIS with FFT and Clarke Transform,"*International Journal of Emerging Technology and Advanced Engineering(IJETAE),* vol. 7, issue 11, pp. 286-289, Nov. 2017.ISSN:2250-2459.

27. Rajveer Singh, Rajendra Kumar, Rebecca, Hamzah Shabbir and Abdullah Zahid, "Over/Under Voltage Triping Circuit for Distributed System Load with GSM alert using Microcontroller," *International Journal of Innovative Technology and Exploring Engineering (IJITEE),*vol. 8, Issue-9, pp. 1335-1339, Jul. 2019.

28. Rajveer Singh, Saurabh Kumar Kesarwani, Neelesh Kumar Gupta and Haroon Ashfaq, "Design of 2-Dof Pid Controller for Load Frequency Control of Two Area Power System using Mfo Algorithm", *International Journal of Engineering and Advanced Technology (IJEAT)* ISSN: 2249 – 8958, Volume-9 Issue-3, pp. 158-161, Feb, 2020.

29. Rajveer Singh, Vinay Krishna Gharami, "Development of a wavelet – ANFIS Based Fault Location and Identification System for Underground Power Cables," International Journal of Innovative Technology and Exploring Engineering (IJITEE) vol. 9 Issue-11, pp. 35-41, Sept. 2020.

30. Rajveer Singh, "Artificial Neural Network & Wavelet Transform for Identification and Classification of Faults in Electrical Power System", *International Journal of Engineering Research and Applications*, vol. 3, Issue 6, pp.1993-1999, Nov-Dec 2013, ISSN: 2248-9622.

31. Rajveer Singh, "Fault detection of Electric Power Transmission Line by using Neural Network" International Journal of emerging Technology and advanced Engineering, vol. 2, Issue 12, pp. 530-538, December 2012, ISSN 2250-2459

International/ National Conferences

List of Conferences/Seminars/Workshop attended

1. V. K. Chandna, P. Kumar, M. S. Thomas and R. Singh, "Tuned Fuzzy Controller Based Over Current Protection Scheme," *2008 Joint International Conference on Power System Technology and IEEE Power India Conference*, 2008, pp. 1-4, doi: 10.1109/ICPST.2008.4745174.

2. Rajveer Singh, H. Ashfaq and I. Hussain, "Power Quality Analysis of Isolated Micro-hydro Power System for Rural Application" paper presented in 3rd National conference on Power Electronics and Intelligent Control from 01 November to 02 November, 2012, Malaviya National Institute of Technology, Jaipur.

3. Majid Jamil, Sanjeev Kumar Sharma and Rajveer Singh, "Different techniques for fault detection and classification in three phase transmission line: A Review" paper presented in Emerging trends in Electrical & Electronics Engineering (ETEEE-2015) 2nd& 3rd February, 2015, National Conference organized by Department of Electrical Engineering, faculty of Engineering & Technology, Jamia Millia Islamia, New Delhi.

4. MHRD GIAN Course on Role of Smart Building Energy Management Systems in the Development of Smart City, Department of Electrical Engineering, JMI, New Delhi, March 06th- 10th, 2018.

5. Abhishek Kumar Gupta, Ravi Sexena, Rajveer Singh, Sanjiv Kumar, "A Technique for Power Factor Measurement of Household and Industrial Load using LabVIEW ", 2018 2nd International Conference on Power Electronics, Intelligent Control and Energy Systems, October 22-24, 2018, Organized by Department of Electrical Engineering, Delhi Technological University, Delhi.

6. Application of Super-Capacitor as Hybrid Energy Storage device in standalone PV System, International Conference on power Electronics, Control & Automation (ICPECA-2019), Department of Electrical Engineering, Jamia Millia Islamia, New Delhi, 16th-17th Nov, 2019.

7. Major Issues Related to Power Quality, Impacts and Possible Solutions in Utility Grid with Integration of Renewable Energy Sources- A Review, JTA Multidisciplinary International Conference (JTACON-2020), Jamia Teachers Association (JTA) Jamia Millia Islamia, New Delhi.16th-18th February, 2020.

8. National Conference on Smart Energy Systems (NCSES-2019), Department of Electrical & Electronics Engineering and Department of Electrical Engineering, JSS Academy of Technical Education, Noida, 14th-15th June, 2019.

9. Singh, S.K., Singh, R., Ashfaq, H. *et al "*Enhanced Ride-Through Capability under Low Voltage Conditions in Inverter Interfaced Distributed Generation" has been presented in 2nd international conference on signals, machines and automation (SIGMA)-5-6, August, 2022 at NSUT, New Delhi, India. [Published in International Journal of Nonlinear Dynamics and Control Inderscience journal].

10. A. Kumar, Prashant, D. Kumar, F. Danish, M. Sarwar and R. Singh, "Reliability Assessment of Distribution System With Distributed Generation: A Case Study," *2023 International*

Conference on Power, Instrumentation, Energy and Control (PIECON), Aligarh, India, 2023, pp. 1-6, doi: 10.1109/PIECON56912.2023.10085774.

11. D. Kumar, A. Kumar, R. Singh and M. Sarwar, "Detection of High Impedance Fault in Low Voltage Distribution System using Discrete Wavelet Transform," 2023 2nd International IEEE Conference for Innovation in Technology (INOCON), Bangalore, India, 3rd - 5th March, 2023, pp. 1-5, doi: 10.1109/INOCON57975.2023.10101138.

Faculty Development Programme

1. NEP 2020 Orientation & Sensitization Programme (MM-TTP) UGC, Malaya Mission Teacher Training Programme, UGC 2-week MMTTC, Jamia Millia Islamia, New Delhi, 18th March - 28th March, 2024.

2. Faculty Development Programme (FDP) on Power Quality and Reactive Power Management, Department of Electrical Engineering, Delhi Technological University association with Clariant Power System Ltd., Pune DTU, Delhi, 06th-10th July, 2020.

3. Faculty Development Programme (FDP) on Python Programming Language, Department of Computer Engineering, Jamia Millia Islamia association with IIT Bombay, JMI, New Delhi, August 31st to September 04th , 2020.

4. Faculty Development Programme (FDP) on Research Initiatives in Advanced Control Systems, Department of Electrical & Electronics Engineering, Muthoot Institute of Technology & Science, Ernakulam, Kerela, 22nd-26th February, 2021.

5. Faculty Development Programme (FDP) on Effective Teaching and Learning of Power Converters for Electric Vehicles, Department of Electrical Engineering, National Institute of Technology Warangal, 1st-6th March, 2021.

6. Online Short Term Training Program on Moral, Values, Attitude and Behavior Sciences (Phase-III), Department of Electrical &Electronics Engineering, GL Bajaj Institute of Technology & Management, Gr. Noida (UP), India, 8th March- 13th March, 2021.

7. Faculty Development Programme (FDP) on Application of Power Electronics in Renewable Energy and Power Systems, Department of Electrical & Electronics Engineering, KIET Group of Institutions, Ghaziabad, June 18th to June 22nd, 2018.

8. UGC 1st three-week Special Winter Programme from 11th December , 2012 to 01st January, 2013, organized by Academic Staff College, Jamia Millia Islamia, New Delhi.

9. UGC 03rd three-week Special Summer School from 16th May to 05th June, 2014, organized by Academic Staff College, Jamia Millia Islamia, New Delhi.

10. UGC sponsored two week short term training programme on “Integrating Renewable Energy sources into emerging Electrical power systems”, during 08th to 19th December, 2014, organized by Department of Electrical Engineering, Delhi Technological University, Delhi.

11. UGC Sponsored 98th Orientation Programme four-week from 30th September to 01st November, 2011, Organized by Academic Staff College, Jamia Millia Islamia, New Delhi.

12. Two week AICTE Staff Development Programme on "Flexible A.C. Transmission Systems and Power System Voltage Stability: Recent Advances", during 11th to 22nd July, 2011, Organized by Department of Electrical Engineering, Delhi Technological University, Delhi.

13. Two weeks AICTE Staff Development Programme on "Recent Advanced in Electrical Power & Energy Systems", during 09th to 22nd December, 2011, organized by Department of Electrical Engineering, Faculty of Engineering & Technology, Jamia Millia Islamia, New Delhi.

List of Books/Book Chapters

1. Rajeev Kumar, Rajveer Singh, and Haroon Ashfaq, "A Nature-Inspired Metaheuristic SwarmBased Optimization Technique BFOA Based Optimal Controller for Damping of SSR", *Intelligent Computing Techniques for Smart Energy Systems, Lecture Notes in Electrical Engineering, Lecture Notes in Electrical Engineering607, Proceedings ofICTSES-2018,* ***Springer, Singapore****,* Vol. 607, pp. 631-639, 2018.

2. Sudhir Kumar Singh, Rajveer Singh, *et al*, "Impact of Inverter Interfaced DG Control Schemes on Distributed Network Protection", *Recent Advances in Power Electronics and Drives, Lecture Notes in Electrical Engineering 707,Select Proceedings of EPREC-2020,* ***Springer Singapore***, vol. 707, pp. 229-242, Apr. 2021.

3. **Rajveer Singh, "Comprehensive Glossary of Engineering",** ***Government of India, MHRD, http://www.csttpublication.mhrd.gov.in/english/result.php,*** **2018**.

Invited Lectures

1. Deliver an expert lecture in Faculty development programme on, "Advanced Modelling, Simulation & Computational Techniques in Electrical engineering (AMSCTEE-2016)" during 17th August to 23rd August, 2016, funded by TEQIP-II in the Department of Electrical engineering, School of Engineering & Technology, IFTM University, Moradabad.

2. Deliver an expert lecture in Faculty Development Programme on, "Advanced Modelling, Simulation & Computational Techniques in Electrical engineering (AMSCTEE-2016)" during 17th October to 22nd October, 2016, funded by TEQIP-II in the Department of Electrical engineering, School of Engineering & Technology, IFTM University, Moradabad.

3. Deliver an expert lecture in Faculty Development Programme (FDP) on Application of Power Electronics in Renewable Energy and Power Systems, Department of Electrical & Electronics Engineering, KIET Group of Institutions, Ghaziabad, June 18th to June 22nd, 2018.