

Application for Post Doctoral Research Fellowship

Dr. M. Rizwan

Assistant Professor

Department of Electrical Engineering,
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1. Professional Qualification

Ph. D. (Electrical Engineering): **Jamia Millia Islamia, (Central University)**, New Delhi.

M.Tech (Electrical Energy Studies): **Indian Institute of Technology (IIT)**, Delhi.

B.Tech (Electrical Engineering): **Jamia Millia Islamia, (Central University)**, New Delhi.

2. Area of Research:

Emerging Power Systems, Renewable and Sustainable Energy, Distributed Power Generation, Intelligent Modeling, Grid Integration of Renewable Energy Sources

3. Summary of Teaching Experience

July 02, 2010-till date: Assistant Professor (15600-39100), Department of Electrical Engineering, Delhi Technological University, Delhi.

September 11, 2009-July 01, 2010: Associate Professor (16400-22400), Department of Electrical Engineering, KCC Institute of Technology & Management, Greater Noida.

July 23, 2008-September 10, 2009: Assistant Professor (12000-18300), Department of Electrical and Electronics Engineering, Apostle Institute of Technology, Greater Noida.

June 16, 2005-July 22, 2008: Assistant Professor (12000-18300), Department of Electrical and Electronics Engineering, G. L. Bajaj Institute of Technology & Management, Greater Noida.

September 02, 2002-June 15, 2005: Lecturer (8000-13500), Department of Electronics and Communication Engineering, Priyadarshini College of Computer Sciences, Greater Noida.

Total Teaching Experience: 10.5 Years

4. Research Publications

Paper(s) Published in Peer Reviewed Referred International Journals

- 1) **M. Rizwan**, Majid Jamil and Ahmed Sharique Anees, "SPV based Water Pumping System for an Academic Institution", *American Journal of Electrical Power and Energy Systems*, USA, Vol. 1, No. 1, pp. 1-9, 2012.
- 2) **M. Rizwan**, Dinesh Kumar and Rajesh Kumar, "Fuzzy Logic Approach for Short Term Electrical Load Forecasting", *International Journal of Electrical and Power Engineering Frontier*, Hong Kong, Vol. 1, Issue 1, pp. 8-12, December, 2012.
- 3) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Generalized Neural Network Approach for Global Solar Energy Estimation in India," ***IEEE Transactions on Sustainable Energy, USA***, Vol. 3, No. 3, July 2012, pp. 576-584. **ISSN: 1949-3029**.
- 4) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Solar Energy Estimation using REST Model for PV-ECS based Distributed Power Generating System", ***Solar Energy Materials & Solar Cells: An International Journal (Elsevier), North-Holland***, Vol. 94, pp. 1324-1328, 2010. **ISSN: 0927-0248, Impact Factor: 4.593**.
- 5) **M. Rizwan**, Sheeraz Kirmani and Majid Jamil, "Techno-Economic Feasibility Analysis of Solar Photovoltaic Power Generation: A Review", ***International Journal of Smart Grid and Renewable Energy, USA***, Vol. 3, No. 4, pp.266-274, 2012.
- 6) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Solar Energy Estimation using REST2 Model", ***International Journal on Energy & Environment***, Vol. 1, pp. 367-374, 2010. **ISSN 2076-2895 (Print), ISSN 2076-2909 (Online)**.
- 7) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Performance Evaluation of Solar Irradiance Models: A Comparative Study", ***International Journal of Electronics & Electrical Engineering (IJEED)***, Vol. 1, pp 142-151, 2009. **ISSN 0974-2042**.
- 8) **M. Rizwan** and Ranjeet Kumar, "Technical Challenges and Problems in the Implementation of Smart Grid in India", ***International Journal on Recent Trends in Engineering and Technology, USA***, Vol. 6, No. 1, pp. 263-265, 2011. **ISSN: 2158-5555 (print), 2158-5563 (online)**.
- 9) **M. Rizwan**, Amit Kumar Singhal, Aziz Ahmed and Sheeraz Kirmani, "Generalized Methodology for the Prediction of Wind Power: A Fuzzy Logic based Approach", ***International Journal of Engineering Sciences Research***, Vol. 2, pp. 57-60, 2011. **ISSN: 2230-8504; e-ISSN: 2230-8512**.
- 10) **M. Rizwan**, Tariq Khan and Aziz Ahmed "Fuzzy Logic based Modeling for the Assessment of SPV System", ***International Journal of Engineering Sciences Research***, Vol. 2, pp. 131-135, 2011. **ISSN: 2230-8504; e-ISSN: 2230-8512**.

Paper(s) Published in Peer Reviewed Referred National Journals

- 1) **M. Rizwan**, Majid Jamil and Sirajuddin Ahmed "Feasibility of Import of Hydro Power to India from its Neighbouring Countries and Environmental Benefits", *National Journal "CURIE"*, Published by BITS Pilani, Vol. 1, pp 49-56, 2008.

List of Paper(s) Published in Peer Reviewed International Conference Proceedings

- 1) **M. Rizwan**, Rajesh Kumar and Dinesh Kumar, "Renewable Energy based Optimal Hybrid System for Distributed Power Generation", *Proceedings of International Conference on Sustainable Technologies (ICST-2013)*, organized by Jamia Millia Islamia, New Delhi during January 18-20, 2013.
- 2) **M. Rizwan**, "Development of Hybrid Water Heating System and its Environmental Benefits", *Proceedings of International Conference on Sustainable Technologies (ICST-2013)*, organized by Jamia Millia Islamia, New Delhi during January 18-20, 2013.
- 3) **M. Rizwan**, Narendra Kumar, Arshad Husain Quadri and Hemant Ahuja, "Transient Stability Analysis of Distribution System with DFIG based Wind Penetration", *Proceedings of International Conference on Sustainable Technologies (ICST-2013)*, organized by Jamia Millia Islamia, New Delhi during January 18-20, 2013.
- 4) **M. Rizwan**, Sanju Saini and Upma Singh, "Prediction of Wind Energy using Intelligent Approach", *IEEE India International Conference on Power Electronics (IICPE-2012)*, organized by **Delhi Technological University**, Delhi, India during December 06-08, 2012.
- 5) **M. Rizwan**, Majid Jamil and Ahmed Sharique Anees, "Fault Location Scheme on a Three Phase Transmission Line using Synchronized Phasor Measurement", *IEEE India International Conference on Power Electronics (IICPE-2012)*, organized by **Delhi Technological University**, Delhi, India during December 06-08, 2012.
- 6) **M. Rizwan**, Sheeraz Kirmani and Majid Jamil, "Optimal Placement of SPV based DG System for Loss Reduction in Radial Distribution Network Using Heuristic Search Strategies", *Proceedings of IEEE International Conference on Energy, Automation and Signal (ICEAS 2011)*, Bhubaneswar, India, during December 28-30, 2011.
- 7) **M. Rizwan**, "Use of Fuzzy Logic and Artificial Neural Networks Approach in Solar Energy Applications: A Review", *Proceedings of International Conference on Advances in Modeling, Optimization and Computing (AMOC-2011)*, organized by **IIT Roorkee** during December 5-7, 2011, pp. 791-801.
- 8) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Assessment of SPV System using ANN and VHDL", *Proceedings of IEEE International Conference on Power Electronics Drives & Energy Systems (PEDES-2010)*, organized by **IIT Delhi**, during December 20-23, 2010.
- 9) **M. Rizwan**, Majid Jamil, D. P. Kothari and Kimmi Verma, "Estimation of Global Solar Irradiance using Regression Model for Jodhpur, India", *Proceedings of International Symposium on Photovoltaic Science & Technology*, organized by **IIT Kanpur** on January 13, 2010, pp. 43-47.

- 10) **M. Rizwan**, Majid Jamil and D. P. Kothari, "A High Performance Model to Predict Global & Diffuse Radiation on Horizontal Surface for Various Solar Energy Applications", Proceedings of **International Conference on Renewable Energy Asia (REA) entitled Energy and Environment for Sustainable Development**, organized by **IIT Delhi** during December 11-13, 2008, pp. 351-356.

List of Paper(s) Published in Peer Reviewed National Conference Proceedings

- 1) **M. Rizwan** and Ranjeet Kumar, "Challenges, Issues and Possible Solutions in the Implementation of Future Smart Grid", Proceedings of **National Electrical Engineering Conference (NEEC-2011) on Power & Energy Systems for Tomorrow**, organized by **Delhi Technological University Delhi** during December 16-17, 2011.
- 2) **M. Rizwan** and Manoj Kumar Meena, "Control of Grid Sub Station using PLC", Proceedings of **National Electrical Engineering Conference (NEEC-2011) on Power & Energy Systems for Tomorrow**, organized by **Delhi Technological University Delhi** during December 16-17, 2011.
- 3) **M. Rizwan**, Majid Jamil, D. P. Kothari and Sheeraz Kirmani, "Design and Economic Analysis of SPV System for Domestic Load Demand: A Case Study", Proceedings of **National Seminar on Micro Solar Energy Generation and Utilization**, organized by **IIT, Kanpur** during September 3-4, 2011, pp. 27-31.
- 4) **M. Rizwan**, Majid Jamil and D. P. Kothari, "Global Solar Energy Prediction using GNN", Proceedings of **National Conference on Power, Instrumentation, Energy and Control** (π CON-2011), organized by **AMU Aligarh, India**, 12-13 February, 2011, pp. 254-257.
- 5) **M. Rizwan** and Majid Jamil, "Performance Evaluation of REST 2 Model for the Estimation of Solar Irradiance under Cloudless Sky", Proceedings of **National Conference on Problems Practices and Prospects in Power Distribution System, Operation & Control** organized by **Punjab Engineering College, Chandigarh** during January 23-24, 2009, pp. 253-256.
- 6) **M. Rizwan**, Majid Jamil and D. P. Kothari, " Prediction of Solar Irradiance Using Broadband Models: Validation of REST 2 Model", Proceedings of **National System Conference entitled Energy Systems and Optimization (NSC 2008)**, organized by **IIT Roorkee**, during December 17-19, 2008, pp.1-1.
- 7) **M. Rizwan** and Majid Jamil, "Estimation of Solar Irradiance for PV- ECS based Distributed Power Generation", Proceedings of **National Conference on the Emerging Trends in the Photovoltaic Energy Generation and Utilization** (NCETPEGU) organized by **IIT, Kanpur** during 27-29 March, 2008.

5. Ph. D. / M. Tech Guidance

Ph. D.: In Progress (04)

M. Tech.: Completed (05), In Progress: (03)

6. Workshop/Short Term Course/SDP organized/Attended

QIP Course/Seminar/Workshop Organized

1. **IEEE India International Conference on Power Electronics (IICPE-2012)**, organized by **Delhi Technological University**, Delhi, India during December 06-08, 2012.
2. AICTE Sponsored SDP (Two Weeks) on “Flexible A. C. Transmission Systems and Power System Voltage Stability: Recent Advances at Delhi Technological University, Delhi during July 11-22, 2011.
3. Two days NBA Workshop on “Outcome Based Accreditation Process and Parameters” at Delhi Technological University, Delhi, India during September 21-22, 2012.
4. Seminar on “Some Aspects of Power and Energy: Future Challenges” by Professor D. P. Kothari, IIT Delhi at KCC Institute of Technology & Management, Gr. Noida on April 10, 2010.
5. Two days National Workshop on “MATLAB and its Applications in Engineering” at G. L. Bajaj Institute of Technology & Management, Gr. Noida during April 25- 26, 2008.
6. Seminar on “Fuzzy Logic & Its Applications in Engineering” by Professor A. Q. Ansari, Head Department of Electrical Engineering, Jamia Millia Islamia, New Delhi at G. L. Bajaj Institute of Technology & Management, Gr. Noida on February 27, 2008.
7. Seminar on “Electrical Power and Energy Systems” by Professor D. P. Kothari, IIT Delhi at G. L. Bajaj Institute of Technology & Management, Gr. Noida on November 22, 2007.

QIP Course(s) Attended

1. QIP Short term course (One Week) on “Solar Energy Applications and Photovoltaics” at **IIT, Delhi** during December 12-18, 2012.
2. AICTE Sponsored Short term course (One Week) on “Advanced Signal Processing and Embedded Systems” at **Delhi Technological University**, Delhi April July 09-14, 2012.
3. AICTE Sponsored Short term QIP course (Two Weeks) on “Recent Advances in Electrical Power and Energy Systems”, at **Jamia Millia Islamia (Central University)**, New Delhi during December 09-22, 2011.
4. QIP School (One week) on “Intelligent Systems Control” at **IIT Kanpur** during October 5-9, 2011.
5. AICTE Sponsored Short term QIP course (Two Weeks) on “Flexible A. C. Transmission Systems and Power System Voltage Stability: Recent Advances at **Delhi Technological University**, Delhi during July 11-22, 2011.
6. AICTE Sponsored Short term QIP course (One Week) on “Building Integrated Photo Voltaic Thermal Systems” at **IIT Delhi** during February 8-14, 2011.
7. Workshop (One Week) on “Soft Computing and Pattern Recognition” at **Delhi Technological University**, Delhi during July 5-9, 2010.

8. AICTE – MHRD Sponsored (Two week) QIP Summer School on “Alternative Sources of Energy” at **IIT Delhi** during July 10-25, 2008.
9. AICTE–ISTE Sponsored (One week) Short-term QIP Training Programme on “Environmental Management” at **Jamia Millia Islamia (Central University)**, New Delhi during June 02-06, 2008.
10. AICTE Sponsored Short-term (Two week) QIP course on “Solar Energy Utilization and its Applications” at **IIT Delhi** during February 08-22, 2008.
11. AICTE Sponsored Short-term (One week) QIP course on “Energy Conservation” at **IIT Delhi** during December 02-08, 2007.

Conferences/Seminar/Symposium/Workshop Attended

1. **IEEE India International Conference on Power Electronics (IICPE-2012)**, organized by **Delhi Technological University**, Delhi, India during December 06-08, 2012.
2. **International Conference on Sustainable Technologies (ICST-2013)**, organized by **Jamia Millia Islamia**, New Delhi during January 18-20, 2013.
3. **IEEE Tutorials** on Renewable Energy and Smart Grid by Prof. Saifur Rehman, at **Jamia Millia Islamia**, New Delhi, March 29, 2012.
4. *International Conference on Advances in Modeling, Optimization and Computing (AMOC-2011)*, organized by **IIT Roorkee** during December 5-7, 2011.
5. *National Conference on Power, Instrumentation, Energy and Control (π CON-2011)*, organized by **AMU Aligarh**, India, 12-13 February, 2011.
6. **IEEE Standard Associations Workshop** on Smart Grid at **Jamia Millia Islamia**, New Delhi, Feb. 09, 2011.
7. **IEEE international Conference (PEDES 2010): Power Electronics Drives and Energy Systems** organized by **IIT Delhi** during December 20-23, 2010.
8. *National Conference on Innovations in Engineering* at **Delhi Technological University** during November 1-2, 2010.
9. *National Conference on CAN Technology* at **Delhi Technological University** on September 29, 2010.
10. **International Symposium on Photovoltaic Science & Technology**, organized by **IIT Kanpur** on January 13, 2010.
11. *National Conference on Problems Practices and Prospects in Power Distribution System, Operation & Control* organized by **Punjab Engineering College**, Chandigarh, Punjab during January 23-24, 2009.
10. **National System Conference entitled Energy Systems & Optimization (NSC 2008)**, organized by **IIT Roorkee** during December 17-19, 2008.

11. *International Conference on Renewable Energy Asia (REA)* entitled Energy and Environment organized by **IIT, Delhi** during December 11-13, 2008.
12. National Workshop on *MATLAB and its Applications in Engineering* at G. L. Bajaj Institute of Technology & Management, Gr. Noida during April 25-26, 2008.
13. *National Conference on Emerging Trends in the Photovoltaic Energy Generation and Utilization* organized by **IIT Kanpur**, March 27-29, 2008.
14. Tutorials on *Photovoltaic Energy Generation and Utilization* in National Conference organized by **IIT Kanpur**, March 27-29, 2008.
15. Seminar on *an Introduction to Micro Grid as a Building Block for the Distribution Level Smart Grid* at **Jamia Millia Islamia**, New Delhi in 2007.
16. International Conference on *Challenges and Strategies for Sustainable Energy, Efficiency and Environment* organized by **Uttar Pradesh Technical University, Lucknow**, June 2006.

7. Subjects Taught/Laboratory Handled/Developed

Subjects Taught

UG Level: Utilization of Electrical Energy, Electrical Sciences, New & Renewable Energy Resources, Power Systems-I

PG Level: New & Renewable Energy Resources, Power Systems Analysis

Laboratory Developed: **Photovoltaic and Electrical Energy Storage Lab at EED, DTU**
Utilization of Electrical Energy at EED, DTU (In Progress)
 Set up various laboratories of Electrical Engineering at KCC Institute of Technology & Management, Apostle Institute of Technology, G. L. Bajaj Institute of Technology & Management and Priyadarshini College of Computer Sciences, G.Noida.

Laboratory Handled: Electrical Sciences, Power Systems, Electrical Measurements, Electrical Workshop, Electrical Machines

8. Administrative and other Works

1. **Co-ordinator, B. Tech (Part Time)**, Department of Electrical Engineering, **Delhi Technological University**, Delhi.
2. **Co-ordinator, M. Tech Admissions**, Department of Electrical Engineering, **Delhi Technological University**, 2012-13.
3. **Member, Examination Committee**, for conducting Mid and End Semester B. Tech. Theory Examination during 2011-2012 at Delhi Technological University, Delhi.
4. **Deputy Centre Superintendent, M.Tech/MBA/Ph.D Examination**, Delhi Technological University during 2010-2011 at Delhi Technological University, Delhi.

5. **Deputy Centre Superintendent, M. E. Examination, Delhi University** during 2010-2011 at Delhi Technological University, Delhi.
6. **Co-cordinator, M. Tech (Power Systems and Control & Instrumentation)**, Department of Electrical Engineering, Delhi Technological University, Delhi.
7. **Member, Anti Ragging Committee**, Delhi Technological University, Delhi.
8. **Member, Anti Ragging Squad**, Delhi Technological University, Delhi.
9. **Centre Controller, U. P. Technical University State Entrance Examination “UP-SEE 08”** at Ideal Institute of Technology, Ghaziabad.
10. **Asstt. Centre Superintendent, U. P. Technical University Examination** during May 2008 at G. L. Bajaj Institute of Technology & Management, Greater Noida.
11. **Observer, U. P. Technical University End Semester Examination** at Krishna Institute of Engineering and Technology (KIET) Ghaziabad (U.P.) in 2003.
12. **Observer, U. P. Technical University End Semester Examination** at Noida Institute of Engineering & Technology (NIET), Greater Noida in 2004.
13. **Asstt. Centre Superintendent** (four times) in **B.Tech Entrance Test of Jamia Millia Islamia** (Central University), New Delhi.
14. **Head**, Dept. of Electrical & Electronics Engineering, Apostle Institute of Technology, Gr. Noida.
15. **Examination Controller and Chief Proctor**, Apostle Institute of Technology, Gr. Noida.
16. **Head**, Dept. of Electrical & Electronics Engineering, G. L. Bajaj Institute of Technology & Management, Gr. Noida.
17. **Proctor** in G. L. Bajaj Institute of Technology & Management, Greater Noida.
18. **Convener** of STIC Committee at G. L. Bajaj Institute of Technology & Management, Greater Noida.
19. **Proctor** in Priyadarshini College of Computer Science, Greater Noida.

9. Membership of Professional Bodies/Societies

Member, Institution of Electrical & Electronics Engineers (IEEE), USA

Life Member, Indian Society for Technical Education (ISTE), India

Life Member, System Society of India (SSI), India

Member, Automatic Control and Dynamic Optimization Society (ACDOS), India

12. Member Editorial Board/Reviewer

- Reviewer, IEEE Transactions on Smart Grid, USA.
- Reviewer, International Journal of Sustainable Energy, (Taylor & Francis), UK.
- Reviewer, International Journal of Renewable Energy Technology Research (IJRETR), USA.
- Reviewer, International Journal of Energy and Power Engineering (IJEPE), USA.
- Reviewer, IEEE India International Conference on Power Electronics (IICPE-2012).
- Reviewer, IEEE Power India Conference (PICON-2012).
- Reviewer, International Journal on Smart Grid and Renewable Energy (Scientific Research), USA.

- Reviewer, International Journal of Electrical and Electronic Engineering (Science and Academic Publishing), USA.
- Reviewer, International Journal on Energy & Environment Research, Canada.
- Reviewer, International Research Journal of Engineering Science, Technology & Innovation, Nigeria.
- Reviewer, Academic Journals (Scientific Essays & Research), Egypt.
- Reviewer, National Journal CURIE, Published by BITS, Pilani.
- Reviewed book entitled “Integrated Electronics” by Millman, Tata Mc. Graw Hill Publication, India
- Reviewed book entitled “Basic Electrical Engineering” by D. C. Kulshrestha, Tata Mc. Graw Hill Publication, India
- Reviewed book entitled “Basic Electrical Engineering” by Mittle & Mittle, Tata Mc. Graw Hill Publication, India
- Member, Editorial Board, American Journal of Electrical Power and Energy Systems (EPES), USA.
- Member, Editorial Board, Electrical and Power Engineering Frontier (EPEF), Hong Kong.
- Member, Editorial Board, International Journal of Renewable Energy Technology Research (IJRETR), USA.
- Guest Editor, International Journal on Smart Grid and Renewable Energy (Scientific Research), USA.
- Guest Editor, International Journal on Energy and Power Engineering (Scientific Research), USA.
- Member, Editorial Board, International Journal of Electrical Engineering, India.
- Member, Editorial Board, International Journal of Electronics Engineering Research, India.
- Member, Editorial Board, International Journal of Electronic and Electrical Engineering, India.
- Editor, Proceedings of IEEE India International Conference on Power Electronics (IICPE-2012), India.
- Editor, Proceedings of IEEE National Electrical Engineering Conference (NEEC-2011), India.
- Editor, Proceedings of Staff Development Programme on Flexible AC Transmission Systems and Power Systems Voltage Stability: Recent Trends, DTU, New Delhi, India.

11. Session Chaired at International/National Conferences

- IEEE India International Conference on Power Electronics (IICPE-2012), at DTU, India.
- International Conference on Sustainable Technologies (ICST-2013), organized by Jamia Millia Islamia, New Delhi during January 18-20, 2013.
- IEEE Power India Conference (PICON-2012), at DCRUST, Murthal, India.
- National Electrical Engineering Conference (NEEC-2011), at DTU, India.



(Dr. M. Rizwan)