



**Dr. Haroon Ashfaq, Associate Professor**  
**Department of Electrical Engineering,**  
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### **Professional Qualification**

- **Ph. D.** 2008, from Department of Electrical Engineering, Aligarh Muslim University (A Central University), Aligarh, U.P., India.
- **Title of the Ph.D. Thesis:** Development of ac regulator based controllers for wound rotor induction motors.
- **M.Tech** (Power systems and Drive), 2002, from Aligarh Muslim University, Aligarh, U.P. with first division.
- **B.Tech** (Electrical Engineering) Year 1999 from Department of Electrical Engineering with first division.

### **Teaching Experience**

- 26<sup>th</sup> October, 2018 – Till date working as Associate Professor in the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi.
- 27<sup>th</sup> October, 2006 – 26<sup>th</sup> October, 2018 worked as Assistant Professor in the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi.
- 5<sup>th</sup> September, 2004- 15<sup>th</sup> May 2005, worked as Guest faculty in ZHCOET, AMU, Aligarh.
- 20<sup>th</sup> August, 2002- 15<sup>th</sup> May 2003, worked as Lecturer in University Polytechnic, AMU, Aligarh.
- 12<sup>th</sup> March, 2001- 22<sup>nd</sup> June 2001, worked as Lecturer in DIT, Dehradun.

### **Administrative Responsibilities**

- Assistant Proctor, Jamia Millia Islamia from August 2019 till date.
- Training and Placement coordinator of the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi., Year 2015-2019.
- Member Departmental Technical-cum-Sub Purchase committee, from 2015 to 2020.
- Member Departmental Board of Studies (BoS) from 2006 to till date.
- Member, Departmental Research Committee (DRC) from 2017 till date.
- Asstt. Superintendent of Exams B.Tech.& B.E. and BA. Private, 2019,2020,2021.
- Member of the verification officer, Faculty of Engineering and Technology, JMI, for the Admission in B.Tech., M. Tech.& Ph.D. admissions, 2014-2021.
- Member of Screening Committee for Contractual faculty 2021.

### **Departmental Responsibilities**

- Coordinator, Electrical Machines and Power Electronics Group in Course revision workshop for NBA preparation held in Department of Electrical Engineering, Jamia Millia Islamia,7-8 Feb, 2017.
- 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, JMI, 2015.
- Member of the organizing committee and subject group expert Electrical Machines and Power Electronics Group in Curriculum Revision Workshop of B.Tech and M.Tech courses December 3-4 2012, Department of Electrical Engineering, JMI.

## Ph.D. Supervision

<b>Name of Students</b>	<b>Title of the Ph.D. Thesis</b>	<b>Status</b>
Surendra Kumar Tripathi	Performance Improvement of A Grid-Interactive Wind Energy Conversion System (WECS)	Awarded on 06/06/2016
Mohammad Saood	Modeling And Simulation of A Standalone Wind/Micro-Hydro Power System	Awarded on 24/08/2017
Ibrahim Imbayah Khalefah Imbayah	Embeded Control System for Integration of Renewable Energy Sources into Grid	Awarded on 21/07/2017
Kashif Javed	Development of Smart Interface Scheme for SPV Systems	Awarded October, 2021
Sana Perveen	Reliability Analysis of Solar Photovoltaic (SPV) Power System	Submitted
Mukesh Pushkarna	Integration of DFIG based WECS to distribution system	Ongoing
Rajesh Kumar	Performance Improvement of a Distribution System Integrated to WECS	Ongoing
Shujaat Husain	Performance Evaluation of Electric Vehicles	Ongoing
Huma	Power Quality Improvement of Grid Connected Solar PV using Artificial Intelligence Techniques	Ongoing

## Research Publications

### International Journals

1. D. Ali, W. Paul, M. Ali, M. Ahmad, and H. Ashfaq, "Optimal Placement of Distribution Generation Sources in Hybrid Generation Network", Smart Grid and Renewable Energy, vol 12 no. 5, pp. 65-80, 2021.
2. R. Kumar, R. Singh, H. Ashfaq, S. Kumar Singh, M. Badoni, "Power system stability enhancement by damping and control of Sub-synchronous torsional oscillations using Whale optimization algorithm based Type-2 wind turbines", ISA Transactions, Vol 108, pp. 240-256, ISSN 0019-0578, 2021.
3. R. Kumar, R. Singh and H. 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, Willy, pp. 1846-1867, 2020.
4. R. Kumar, R. Singh and H. 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, 2020.
5. R. Singh, M. Kumar and H. Ashfaq, "An Integrated Solar Photovoltaic and Dynamic Voltage Restorer for Load Voltage Compensation" International Journal of Electrical Engineering & Technology (IJEET), Vol. 9, No. 5, pp. 52-63, 2018.
6. S. Perveen , H. Ashfaq, and M. Asjad, "A fuzzy-based failure mode effect and criticality analysis of solar photovoltaic systems". International journal of Reliability and Safety, Vol. 13, No. 3, pp.194-210, 2019.
7. S. Perveen , H. Ashfaq, and M. Asjad, "Fault Ranking in PV Module based on Artificial Intelligence Technique (AIT)", International Conference on Power Electronics, Control and Automation (ICPECA),2019.
8. M. Saood and H. Ashfaq, "A new formulation for minimum input volt-ampere (VA)-slip relationship of three-phase induction motors" JKsUES, Elsevier, Vol.29, pp. 253-256, 2017.
9. M. Saood and Haroon Ashfaq, "Autonomous micro-hydro-power system for distributed generation: A power quality analysis" International Journal of Current Engineering and Scientific Research, Vol. 2, No. 9, pp. 1-6, 2015.
10. S. Tripathi and H. Ashfaq, "Power maximization of grid connected wind energy conversion system" International Journal of Applied Engineering Research, Vol. 10, No. 4, pp. 9231-9244, 2015.
11. M. Saood and H. Ashfaq, "Comparative analysis of old, recycled and new PV modules" JKsUES, Elsevier, Vol. 29, pp 22-28, 2017.

12. H. Ashfaq, "Enhanced Performance of Doubly Fed Induction Generator based Grid Connected Wind Energy Conversion System" *International Journal of Engineering Research & Technology*, Vol. 5, No. 2, pp.368-372, 2016.
13. H. Ashfaq, "Wind Turbine Emulator For WECS Using Inverter-Controlled Induction Motor" *Journal of Environmental Science, Computer Science and Engineering & Technology*, Vol.5. No.2, pp. 15-24, 2016.
14. H. Ashfaq, "Voltage and Current Inrush Control of Wind Driven Embedded Wound Rotor Induction Generator" *International Journal of Electrical Engineering*, Vol. 4, No. 2, pp. 15-20, 2016.
15. H. Ashfaq, "Maximum Power and Maximum Power Factor Tracking of Grid Connected Wound Rotor Induction Generators" *International Journal on Recent Technologies in Mechanical and Electrical Engineering*, Vol. 3, No. 2 , pp. 05 –10, 2016.
16. K. Javed, H. Ashfaq, and R. Singh, "An improved MPPT algorithm to minimize transient and steady state oscillation conditions for small SPV systems," *International Journal of Renewable Energy Development*, vol. 7, no. 3, pp. 191-197, Dec. 2018.
17. K. Javed, H. Ashfaq & R. Singh, "Optimized Load Profile & Cost Analysis of Stand-alone Photovoltaic System for Rural Power Applications in Indian Scenario" *Smart Science*, Elsevier, Vol. 6, No. 3, pp. 245-255, 2018.
18. K. Javed, H. Ashfaq, R. Singh, S. M. S. Hussain, T. S. Ustun. 2019. "Design and Performance Analysis of a Stand-alone PV System with Hybrid Energy Storage for Rural India." *MDPI, Electronics*, Vol. 8, No. 9, pp. 952-964, 2019.
19. H. Ashfaq, "An Integrated Solar photovoltaic and dynamic voltage restore for Load voltage compensation" *International Journal of Electrical Engineering & Technology*, Vol. 9, No. 5, pp. 52–63, 2018.
20. S. Parveen, M. Asjad& H. Ashfaq, "Reliability assessment of solar photovoltaic systems based on Fuzzy fault tree analysis" *Life Cycle Reliability and Safety Engineering*, Springer, 2018.
21. H. Ashfaq, "Control and simulation for integration of PV system into a grid", *Materials Today*, Elsevier, 2018.
22. H. Ashfaq, "Development of a MATLAB/SIMULINK Model of a Control System for Integration of a Utility", *International Journal of Technical Research and Science*, 2018.
23. H. Ashfaq, "Power Quality improvement of WECS using energy storage system under fault condition" *International journal of applied engineering research*, 2020.
24. H. Ashfaq, "Design of SiC MOSFET based High Efficiency Inverter for Solar PV Applications" *International journal of applied engineering research*, 2020.

25. K. Javed, H. Ashfaq, and R. Singh, "A New Simple MPPT Algorithm to Track MPP under Partial Shading for SPV Systems" *International Journal of Green Energy*, Vol., No., pp., 2019.
26. K. Javed, H. Ashfaq, and R. Singh, "Analysis and Sizing of Hybrid Energy Storage System (HESS) Topologies for Solar Photovoltaic Applications" *International Journal of Energy and Power Systems*, ACTA Press, Vol., No., pp., 2019.
27. K. Javed, H. Ashfaq, and R. Singh, "Application of Supercapacitor as Hybrid Energy Storage Device in Stand-alone PV System" *International Conference on Power Electronics, Control and Automation (ICPECA)*, 2019.
28. H. Ashfaq, Mohammad Saood, Rajveer Singh, "Autonomous Micro-Hydro Power System for Distribution Generation: A Power Quality Analysis," *Technical Research Organization India*, vol 2, issue 9, pp. 2015.

## **International/ National Conferences**

### **List of Conferences/Seminars/Workshop attended**

#### **a) Conference Papers**

1. S. Perveen, H. Ashfaq and M. Asjad, "Fault Ranking in PV Module based on Artificial Intelligence Technique (AIT)," 2019 *International Conference on Power Electronics, Control and Automation (ICPECA)*, 2019, pp. 1-6, doi: 10.1109/ICPECA47973.2019.8975619.
2. K. Javed, H. Ashfaq and R. Singh, "Application of Supercapacitor as Hybrid Energy Storage Device in Stand-alone PV System," 2019 *International Conference on Power Electronics, Control and Automation (ICPECA)*, 2019, pp. 1-4, doi: 10.1109/ICPECA47973.2019.8975650.
3. H. Ashfaq, S. Ahmad and M. Irfan, "A controllable off-grid hybrid power system," 2015 *Annual IEEE India Conference (INDICON)*, 2015, pp. 1-6, doi: 10.1109/INDICON.2015.7443287.
4. H. Ashfaq, "Autonomous micro-hydro power system for distributed generation: A power quality analysis", 9th *International Conference on Instrumentation, Electrical and Electronics Engineering (ICIEEE 2015)*, pp. 1-7, 30 Aug. 2015.
5. H. Ashfaq, "Development of Wind turbine emulator for WECS using inverter controlled induction motor", *Proceedings of ETEEE 2015 Vol-1*, pp.425-430, 2015.
6. H. Ashfaq, "Performance analysis of controllable renewable hybrid power system", *Proceedings of ETEEE 2015 Vol-2*, pp 242-249, 2015.
7. H. Ashfaq, "Performance improvement of grid connected WRIG in wind power generation system", *Proceedings of ETEEE 2015 Vol-2*, pp. 319-323, 2015.
8. H. Ashfaq and S. K. Tripathi, "Performance improvement of wind energy conversion system using matrix converter," 2012 *IEEE 5th India International Conference on Power Electronics (IICPE)*, 2012, pp. 1-5, doi: 10.1109/IICPE.2012.6450425.
9. H. Ashfaq, "Output Maximization of Grid Connected Wind Energy Conversion System using Doubly Fed Induction Generator", 6th *International Conference on Advanced Computing & Communication Technologies (ICACCT-2012)*, Vol. 3, pp. 277-282, 2012.

10. H, Ashfaq, "Performance improvement and analysis of stand-alone hybrid wind/battery/DG power generation system", 6th International Conference on Advanced Computing & Communication Technologies (ICACCT-2012), pp.258-263, 2012.
11. Rajveer Singh, H. Ashfaq and I. Hussain, "Power Quality Analysis of Isolated Micro-hydro Power System for Rural Application" paper presented in 3<sup>rd</sup> National conference on Power Electronics and Intelligent Control from 01 November to 02 November, 2012, Malaviya National Institute of Technology, Jaipur.
12. M. Masihuzzaman, S. K. Alam and H. Ashfaq, "Small signal analysis of current mode active-clamp ZVS dc-dc converters," 2010 Joint International Conference on Power Electronics, Drives and Energy Systems & 2010 Power India, 2010, pp. 1-5, doi: 10.1109/PEDES.2010.5712420.
13. H. Ashfaq, S. A. Nahvi and M. S. J. Asghar, "A Personal-Computer based Controller for Performance Improvement of Grid-Connected Wound-Rotor Induction Generators," 2006 IEEE International Power and Energy Conference, 2006, pp. 432-436, doi: 10.1109/PECON.2006.346690.
14. Haroon Ashfaq and M. S. Jamil Asghar, "Performance improvement of grid-connected wound rotor induction generators," 2006 IEEE Power India Conference, 2006, pp. 3 pp.-, doi: 10.1109/POWERI.2006.1632598.
15. H. Ashfaq and M. S. J. Asghar, "Optimum Input Volt-Ampere Control of Three-Phase Induction Motors Connected to Distributed Generating Systems," 2005 International Conference on Power Electronics and Drives Systems, 2005, pp. 486-488, doi: 10.1109/PEDS.2005.1619735.
16. M. S. Jamil Asghar and Haroon Ashfaq, "Speed control of wound rotor induction motors by AC regulator based optimum voltage control," The Fifth International Conference on Power Electronics and Drive Systems, 2003. PEDS 2003., 2003, pp. 1037-1040 Vol.2, doi: 10.1109/PEDS.2003.1283113.

#### **b. Seminars/ Workshops**

1. AICTE sponsored Short Term Training Programme on Role of Energy Management Systems in Smart Grid, 7-12 June, 2021, organized by Department of Electrical Engineering, JMI.
2. A One Week ONLINE Continuing Education Programme on Applications of Power Electronics to Renewable Energy Sources and Power Quality Improvement Devices, 4-9 January, 2021, organized by NIT, Warangal.
3. One Week Online Faculty Development program on "Recent Advancement & Future Scope of Research in Electrical and Electronics Engineering, 6-10 September, 2021, organized by Raj Kumar Goel Institute of Technology, Ghaziabad, Uttar Pradesh
4. Faculty Development Programme (FDP) on Research Initiatives in Advance Control Systems, 22nd to 26th February, 2021, organized by Department of Electrical and Electronics, Muthoot Institute of Technology & Science, Ernakulam, Kerala.
5. Session Chair, JTACON-2020, organized by JTA/JMI.
6. Conference chair, International Conference on Power Electronics & Automation, Nov.16 to 17, 2019, organized by Department of Electrical Engineering, JMI, New Delhi.
7. MHRD GIAN Course on Role of Smart Building Energy Management Systems in the Development of Smart City, March 06 to 10, 2018, organized by Department of Electrical Engineering, JMI, New Delhi
8. Faculty Development Programme (FDP) on Application of Power Electronics in Renewable Energy and Power System, June 18 to 22, 2018, organized by Department of Electrical & Electronics Engineering, KIET Group of Institutions, Ghaziabad.

9. MHRD GIAN Course on Organic Light Emitting Diodes (OLEDs) for Future Lighting and Displays, Dec 26 to 30, 2017, organized by Department of Applied Science and Humanities, JMI, New Delhi.
10. MHRD GIAN Course on Advance in Power Electronics & Renewable Energy Sources., Feb 06 to 10, 2017, organized by Department of Electrical Engineering, JMI, New Delhi.
11. Session chair in Innovative Applications of Computational Intelligence on Power, Energy and Control with their impact on Humanity, 2016, organized by CIPECH-16 IEEE. 2016.
12. FDP on Advance Modelling, Simulation & Computational Techniques in Electrical Engineering-2016, organized by Faculty Development programme FDP IFTM. 2016.
13. Session chair in INDICON-15, organized by JMI/IEEE, 2015.
14. Conference chair, Emerging Trends in Electrical Engineering, ETEEE-2015, organized by JMI.
15. A 3 week UGC Special summer school course, 16/05 – 5/06/2014 in Jamia Millia Islamia, sponsored by UGC.
16. Lecture on Renewable energy system integration and PQ issues, SPACE 2014 organized by AMITY University.
17. Conference chair, Innovative applications of CI on power, Energy and Controls, CIPECH-2014, organized by IEEE.
18. A 2 week UGC sponsored short term training programme course, 08/12 – 19/12/2014 in Delhi Technological University, sponsored by UGC.
19. Lecture on Recent developments in power and control engineering, RDCAPE-2013, organized by AMITY University.
20. A 4 week 96th OP course, 14/04 – 13/05/2011 in Jamia Millia Islamia, sponsored by UGC.
21. A 2 week AICTE sponsored Staff Development Programme course, 11/07 – 22/07/2011 in Delhi Technological University, sponsored by AICTE.
22. A 2 week AICTE sponsored SDP course, 09/12 – 22/12/2011 in Jamia Millia Islamia, sponsored by AICTE.

### List of Books

1. A Husain , H. Ashfaq, “Control Systems , ISBN 978-81-7700-027-6, Dhanpat Rai & Co. (P) Ltd., 2013.
2. A Husain , H. Ashfaq, Fundamentals of Electrical Engineering , 4<sup>th</sup> Edn., ISBN 978-81-7700-034-4, Dhanpat Rai & Co. (P) Ltd., 2013.
3. A Husain , H. Ashfaq, Electric Machines, 3<sup>rd</sup> Edn., ISBN no 978-81-7700-166-2, Dhanpat Rai & Co. (P) Ltd., 2015.
4. H Ashfaq, Switchgear & Protection, 2<sup>nd</sup> Edn., ISBN no 978-93-80016-07-8, Khanna Book Publishing Co Ltd. 2019



## 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. Haroon Ashfaq, Ibrahim Imbayah Khalefah Imbayah, “Simulation and Control Model of Integration PV into Utility Grid Using MATLAB”, ISSN no 978-981-10-3812-9, 2018.
3. H. Ashfaq, “Simulation and Control Model of Integration PV into Utility Grid Using MATLAB”, Lecture Notes in Networks and Systems.

## Invited Lectures

1. Deliver an expert lecture in Faculty development programme on, “Advanced Modelling, Simulation & Computational Techniques in Electrical engineering (AMSCTEE-2016)” during 17<sup>th</sup> August to 23<sup>rd</sup> 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 17<sup>th</sup> October to 22<sup>nd</sup> 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 18<sup>th</sup> to June 22<sup>nd</sup>, 2018.