Ahmed Riyaz

Chartered Engineer, Member IEEE (USA), Member, I.E. (India)
Web of Science Researcher ID: AAK-1595-2020
ORCID ID: 0000-0001-5049-2988

Sex:	Male	**Marital Status:**	Married
Date of Birth:	15/06/1986	**Nationality:**	Indian
Mobile Number:	+91-9871-033-567	**e-mail:**	riyazamu@gmail.com

Objective

To be a part of an Institute where my creative initiative, ideas, and genuine enthusiasm would allow me to progress and offers me the opportunity to develop new skills while strengthening those I already possess.

Summary

- Teaching Experience: 10 Years + Research Experience: 2 Years
- Chartered Engineer (India)
- Member IEEE (USA)
- Member, I.E. (India)
- Editorial Member, Journal of Energy and Power Engineering (EPE)
- Reviewer for Taylor & Francis
- Reviewer for IEEE
- Qualified IELTS, U.K.
- Qualified GATE with 92.26 percentile
- Secured 2nd Rank at M.Tech.
- Worked as SRF at IIT Roorkee in an MHRD Sponsored Mega R & D Project "Development of open-source Simulation Packages equivalent to MATLAB/ORCAD facilities for e-learning". Developed models are available online and can be simulated online at http://www.sos-tools.org/
- Awarded with best presentation award in International Conference on Signals, Machines and Automation (SIGMA'18), February 23-25, 2018, NSIT Delhi, India
- Established Electrical Machines Lab at BBDIT, Ghaziabad
- Offered for the job in M/S Accenture through Campus Placement in B.Tech

Work Experience

- Assistant Professor (since Sept. '16) at Electrical Engineering Department, BGSBU, Rajouri
- Assistant Professor at Electrical Engineering Department, BBDIT, Ghaziabad, UP from July '13 to Sept. '16
- Visiting faculty at BBDIET & RC, Jahangirabad, Bulandshahar during 2014-15
- Assistant Professor at Electrical Engineering Department, RGGI, Meerut, UP from Aug '12 to July '13

- Senior Research Fellow at Deptt. Of Electrical Engg., IIT Roorkee from Feb. '11 to July '12
- Lecturer at Electrical & Electronics Engineering Department, NIEC, New Delhi from Aug '10 to Feb '11
- Lecturer at Electrical Engineering Department, ZHCET, AMU, Aligarh from Apr. '10 to June '10
- Visiting faculty for B.E. (Evening), ZHCET, AMU, Aligarh from Apr. '10 to June '10

Invited Lectures / Chairs

- Member Organizing Committee, Global Summit on Power and Energy Engineering (GSPEE2022), Dubai, UAE
- Session Co-Chair, IEEE Energy Conversion Congress, and Exposition – Asia (IEEE ECCE-Asia 2021) held from 24th to May 27, 2021, Singapore
- Delivered Expert Talk in International Short-Term Course on "Recent & Emerging Trends in Technology" organized by Department of Civil Engineering, Mohammad Ali Jauhar University, Rampur, U.P. in academic association with Mewat Engineering College, Nuh, Haryana on June 20-24, 2020.
- Member Technical program committee, 3rd International Conference on Machine learning, Advances in computing, Renewable & Communication (MARC 2021)
- Delivered Expert Talk "Application of D.C. Machines in Automaton" during SAIP 2020, Automate Your World: Robotics, Automation & IoT from May 11 to June 05, 2020, organized by the Department of Electronics & Communication Engineering, IILM College of Engineering & Technology, Gr. Noida.
- Member Technical Program Committee, International Conference on Innovation in Cyber-Physical Systems organized by HMRITM, New Delhi
- Member of Technical program committee, 2nd International Conference on Machine learning, Advances in computing, Renewable & Communication (MARC 2021)
- Session Chair at International Conference on "Manufacturing, Advance Computing, Renewable Energy and Communication" on July 19th and 20th 2018 held at HMR Institute of Technology & Management, New Delhi
- Lectures in Short Term Course Faculty Development Program on "Recent Advances and Industrial Applications of Power Electronics Converters and Electrical Machines" during 22-26 October 2018 in the Department of Electrical Engineering, Aligarh Muslim University.
- Lectures in Short Term Course on "Computer-Aided Electrical Machine Design" at Department of Electrical Engineering, NIT, Patna on 25 and 26 April 2018
- Member program committee, CCTES18 (Computational and Characterization Techniques in Engineering & Sciences)
- Lecture on "Induction Machine Analysis Using SIMULINK" at Department of Electrical Engineering, BGSBU on November 19, '16
- Lecture on "Application of MATLAB" at EED, AMU in September 2012
- Lecture on "Application of SIMULINK" at RGGI, Meerut on October 19, '12

Workshop / Conference Organised:

- Organized Workshop on 'MATLAB & Simulink' as Co-ordinator at RGGI, Meerut on 19-20 Oct. '12
- Organized five-day (one week) Short Term Course "Recent Advances in Power & Energy Engineering" on March 12-16, 2018, at BGSBU
- Organized International Conference on Renewable Power (ICRP-2020) during July 23-24, 2020 at BGSBU

Patents

- Granted **Australian Innovation Patent** (Number: 2021106064) "A Method and A System for The Performance of Solar Cell Under Changing Atmospheric Condition".

- Applied patent (Application No.: 201731028010, Dated 07 / 08 / 2017) for "A System of Photovoltaic-Integrated Solar Induction Heating using High Frequency Full Bridge Series Resonant Inverter Under CSI (Current Source Inverter) Mode and Solar Thermal Heating and Method for the Same" in the name of inventors Bidrohi Bhattacharjee, Ahmed Riyaz, Pradip Kumar Sadhu, Ankur Ganguly, Ashok Kumar Naskar and Atif Iqbal at Patent Office, Kolkata, **Government of India**.

Publications

- Riyaz, Ahmed, et al. "Power management of Hybrid grid system with Battery Deprivation Cost using Artificial Neural Network." Frontiers in Energy Research: 632.; doi: 10.3389/fenrg.2021.774408 (**Web of Science Indexed, Impact Factor: 4.008)**
- Riyaz A, Sadhu PK, Iqbal A, Alamri B. Comprehensive Survey of Various Energy Storage Technology Used in Hybrid Energy. Electronics. 2021; 10(16):2037. https://doi.org/10.3390/electronics10162037 (**Web of Science Indexed Q2, Impact Factor: 2.408**)
- Riyaz, Ahmed et al. 'Power Quality Enhancement of a Hybrid Energy Source Powered Packed E-cell Inverter Using an Intelligent Optimization Technique'. January 01 2021 : 1 – 9., Journal of Intelligent & Fuzzy Systems, DOI: 10.3233/JIFS-189751 (**Web of Science Indexed, Impact Factor: 1.851**)
- Iqbal A., Malik H., Riyaz A., Abdellah K., Bayhan S. (**Book Editors**) Renewable Power for Sustainable Growth. Lecture Notes in Electrical

Engineering, vol 723. Springer, Singapore. https://doi.org/10.1007/978-981-33-4080-0_48 (**Scopus Indexed**)

- Asim M., Verma A., Riyaz A. (2021) Analysis on Various Optimization Technique Used for Load Frequency Control. In: Malik H., Fatema N., Alzubi J.A. (Eds) A.I. and Machine Learning Paradigms for Health Monitoring System. Studies in Big Data, Vol 86. Springer, Singapore. https://doi.org/10.1007/978-981-33-4412-9_32 (**Scopus Indexed**)
- Ansari A.R., Khursheed M., Riyaz A., Kumar M. (2021) Generation of HVDC from Voltage Multiplier Using Opto-Isolator and Marx Generator. In: Iqbal A., Malik H., Riyaz A., Abdellah K., Bayhan S. (Eds) Renewable Power for Sustainable Growth. Lecture Notes in Electrical Engineering, vol 723. Springer, Singapore. https://doi.org/10.1007/978-981-33-4080-0_48 (**Scopus Indexed**)
- M. I. Sarwar, M. S. Alam, A. Sarwar, M. Zaid, A. Riyaz and M. Sarfraz, "PSO based Optimal Operation of a Cascaded Grid Connected Three Phase Solar P.V. Inverter," *2021 International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT)*, 2021, pp. 1-7, DOI: 10.1109/ICAECT49130.2021.9392568. (**Scopus Indexed**)
- A. Riyaz, A. Iqbal and M. Tariq, "Five-Phase Twenty-Seven Level Inverter Using Single DC Source for Photovoltaic Application," 2020 IEEE International Conference on Computing, Power and Communication Technologies (GUCON), Greater Noida, India, 2020, pp. 594-598, DOI: 10.1109/GUCON48875.2020.9231200. (**Scopus Indexed**)
- Ahmed Riyaz, Pradip Kumar Sadhu, Atif Iqbal, Md. Abdullah Ansari," Performance Analysis of Packed U-cell Based Inverter-Fed Five-Phase Induction Motor Drive Using SinPWM Technique," International Journal of Power Electronics and Drive Systems (IJPEDS), Vol. 11, No. 4, 2020 (**Scopus Indexed**) http://doi.org/10.11591/ijpeds.v11.i4.pp1899-1907
- Asim M., Khan M.S., Ahmad J., Umar T., Riyaz A. (2020) Efficiency Enhancement of Solar Panel Using Photodiode. In: Sikander A., Acharjee D., Chanda C., Mondal P., Verma P. (eds) Energy Systems, Drives and Automation. Lecture Notes in Electrical Engineering, vol 664. Springer, Singapore. https://doi.org/10.1007/978-981-15-5089-8_20 (**Scopus Indexed**)
- Sinha S., Agarwal P., Gupta N.K., Asim M., Riyaz A. (2020) Performance of Solar Cell Under Changing Atmospheric Condition. In: Sikander A., Acharjee D., Chanda C., Mondal P., Verma P. (eds) Energy Systems, Drives and

Automations. Lecture Notes in Electrical Engineering, vol 664. Springer, Singapore. https://doi.org/10.1007/978-981-15-5089-8_21 (**Scopus Indexed**)

- Marif Daula Siddique, Atif Iqbal, Ahmed Riyaz," Single-Phase 9L Switched-Capacitor Boost Multilevel Inverter Topology," IEEE PEDES 2020 Power Electronics Drives and Energy System 16-19 December 2020 Jaipur, Rajasthan, India Malaviya National Institute of Technology, Jaipur (**Scopus Indexed**)
- B Prathap Reddy, Atif Iqbal, Ahmed Riyaz," Adaptability of 9-Switch Inverter Configurations for Multiphase Induction Motors with Phase Reconfiguring Techniques," IEEE PEDES 2020 Power Electronics Drives and Energy System 16-19 December 2020 Jaipur, Rajasthan, India Malaviya National Institute of Technology, Jaipur (**Scopus Indexed**)
- Shaikh Moinoddin, Ahmed Riyaz, "Dual Seven-Phase Supply Using a Special Three to Fourteen-Phase Transformer Connection Scheme," International Conference on Recent Advances in Engineering & Science (ICRAES 2020), 11-12, January 2020, AMU, Aligarh
- Ahmed Riyaz, Pradip Kumar Sadhu, Atif Iqbal, Abdul Azeem, "Performance Analysis of Depenbrock Level-1 and Level-3 PWM Schemes in Five Phase Inverter,"; 2nd International Conference on Energy System, Drives & Automations, December, 28th- 29th, 2019, Kolkata, India
- Ahmed Riyaz, Pradip Kumar Sadhu, Atif Iqbal, Mohd Tariq," Determination of Symmetrical Components and Sequence Circuit in a Three-To-Five Phase System," 2nd International Conference on Energy System, Drives & Automations, December, 28th- 29th, 2019, Kolkata, India
- Azeem A., Tariq M., Sarwar A., Riyaz A., BharatiRaja C. (2019) Mathematical Analysis of Various Modulation Strategies Used for Multilevel Inverter. In: Mishra S., Sood Y., Tomar A. (Eds) Applications of Computing, Automation and Wireless Systems in Electrical Engineering. Lecture Notes in Electrical Engineering, vol 553. Springer, Singapore. https://doi.org/10.1007/978-981-13-6772-4_42 (**Scopus Indexed**)
- Ansari M.K., Azeem A., Sarwar A., Tariq M., Hussan M.R., Riyaz A. (2020) Comprehensive Analysis of Different Modulation Techniques on a Multi-level Neutral Point Clamped Inverter in a Solar P.V. System. In: Pandian A., Ntalianis K., Palanisamy R. (eds) Intelligent Computing, Information and Control Systems. ICICCS 2019. Advances in Intelligent Systems and

Computing, vol 1039. Springer, Cham. https://doi.org/10.1007/978-3-030-30465-2_48 (**Web of Science and Scopus Indexed**)

- Md. Abdullah Ansari, Arshad Mohammad, Mohd Tariq, Ahmed Riyaz," Residential Energy Conservation using Efficient Home Appliances," 'International Journal of Innovative Technology and Exploring Engineering' Volume-8 Issue-10, August 2019. https://www.ijitee.org/wp-content/uploads/papers/v9i3/J96290881019.pdf (**Scopus Indexed**)
- I. Pervez, A. Pervez, M. Tariq, A. Sarwar, M. Zaid and A. Riyaz, "A Maximum Power Point Tracking Method for a Partially Shaded Solar P.V. Cell using PSO with Damped Inertial Weight Algorithm and Time varying Acceleration," 2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON), Aligarh, India, 2019, pp. 1-6, DOI: 10.1109/UPCON47278.2019.8980088. (**Scopus Indexed**)
- M. Shahabuddin, A. Riyaz, M. Asim, M. M. Shadab, A. Sarwar and A. Anees, "Performance Based Analysis of Solar P.V. Emulators: A Review," 2018 International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES), Lucknow, India, 2018, pp. 94-99, DOI: 10.1109/CCTES.2018.8674082. (**Web of Science Indexed**)
- Mohammed Asim, Ahmed Riyaz, Saurabh Tiwari and Archana Verma;" Performance Evaluation of Fuzzy Controller for Boost Converter with Active PFC," Page No. 5169–5175, Journal of Intelligent & Fuzzy Systems 35 (2018), IOS Press (**Web of Science Indexed, Impact Factor: 1.851**)
- Enas Mohammad, Fatima Khan, Hadeel Bassel, Atif Iqbal & Ahmed Riyaz (2017) Comparative analysis of three-phase to five-phase transformer connections, Australian Journal of Electrical and Electronics Engineering, (Taylor & Francis) Vol. 14, Nos. 1-2, pp. 20-29, DOI: 10.1080/1448837X.2018.1437678 (**Scopus Indexed**)
- Mohammed Asim, M. A. Mallick, Ahmed Riyaz; "Comparison of MPPT Strategies for Solar Modules Under Rapidly Changing Atmospheric Conditions," *International Conference on Energy Generation & Conservation for Meeting India's Futuristic Needs,* 22nd March-2014, BBDIT, UP
- Ahmed Riyaz, Iqbal, A., Saleh, M., Kalam, A. (2013), "Performance Analysis of Soft Starter Based Control of Five-phase Induction Motor," 2013 *IEEE PES General Meeting, 21 - 25 July 2013, Vancouver, BC, Canada,* CD-ROM paper.
- Ahmed Riyaz, S P Singh, S K Singh; "Potential Benefits of Self-excited induction generator (SEIG) in Distributed Generation" *ETDG-2012, NIEC, GGSIP University, New Delhi*

- Ahmed Riyaz, Atif Iqbal, Shaikh Moinoddin, Sk. Moin Ahmed, Haitham Abu-Rub; "Comparative Performance Analysis of Thyristor and IGBT based Induction Motor Soft Starters," *International Journal of Engineering, Science and Technology*-Sept-2009, pp. 90-105, ISSN 2141-2839 (Online); ISSN 2141-2820 (Print)

Workshop/Conference Attended:

- Attended Three-Day Workshop "FPGA Based System Design" from April 29 to May 01, 2019, held at AMU.
- Attended One Week AICTE recognized Short Term Course on "Statistical Data Analysis and Optimisation using Design of Experiment (DOE)" conducted by NITTTR, Chandigarh, from 12th to November 16' 2018
- Attended One Week AICTE recognized Short Term Course on "Life Skills Development" conducted by NITTTR, Chandigarh, from July 30, 2018, to August 03, 2018
- Attended one day workshop "TEQIP Action Plan as per AICTE Mandate" on April 12, '18, at MNIT, Jaipur.
- Attended International Conference-SIGMA from February 23 '18 to February 25 '18 at NSIT, New Delhi
- Attended one day workshop on "Overview of PMSS software and Uploading Procurement Plan and Expenditure filling through PFMS" held at SMVDU, Jammu on 15th Nov. '17
- Attended Two-day orientation Workshop "Student Learning Assessment (SLA)" held at AICTE Auditorium, New Delhi on 11th Nov. '17
- Attended Two-day workshop cum training on Professional Development Trainings (PDTs) for the faculty/Administrators of TEQIP-III Institutions at IIM Shillong on October 31 & November 01 '17.
- Attended One Week AICTE recognized Short Term Course on Scilab Programming conducted by NITTTR, Chandigarh, from August 21 '17 to August 25 '17 at BGSBU
- Attended Two-day TEQIP-III Orientation Workshop by NPIU (MHRD) at India Habitat Centre, New Delhi, on 21st-22nd July '17.
- Attended the short-term course on "Advanced Power Electronics and Power Quality" from July 05 to July 10, 2015, at ISM Dhanbad
- Attended short-term course "Advances in Power Electronics & Renewable Energy" at ISM, Dhanbad from July 07 '14 to July 11 '14

- Attended IEEE Workshop "Revitalizing Power Education" at IITD for advancement and quality education of Engineering in India on November 23, '12 as College representative of RGGI, Meerut.

Area of Interest

- Renewable Energy
- Multi-phase Drives System
- Power Electronics
- A.C. Drives and D.C. Drives
- Electrical Machines
- Open-Source Simulation Software Development

Academic/Prof. Qualification

Academic/Prof. Degree	Year	College/School	University/Board	Result
PhD	Pursuing	IIT (ISM), Dhanbad	IIT (ISM), Dhanbad	Pursuing
M.Tech (Power System & Drives)	2009	ZHCET, AMU Aligarh (UP)	AMU	77.51%
B. Tech (Electrical Engg).	2007	ZHCET, AMU Aligarh (UP)	AMU	7.823 CPI
Senior Secondary School Certificate (XII^{th})	2003	Senior Secondary School, AMU Aligarh (UP)	AMU	74%
Secondary School Examination (X^{th})	2001	Govt. Boys Senior Secondary School No.-1, C-Block, Yamuna Vihar, New Delhi	CBSE	70%

Dissertation and Projects

- M.Tech Dissertation: Performance analysis of a five-phase induction motor for variable voltage supply
- M.Tech Project: Performance analysis of a three-phase induction motor for variable voltage supply
- B.Tech Project (Major): Modelling and Simulation of Vector Controlled induction machine drive.
- B.Tech Project (Minor): Electrical Machine Design I: Induction Motor, Specification: 50kW, 1.1kV, 3-Phase, 750 rpm, Wound Rotor
- B.Tech Project (Minor): Electrical Machine Design II: Transformer, Specification: Three-phase 60kVA, 11000/440V, Core Type Distribution Transformer, Δ/Y connected with 5% tapping
- B. Tech Project (Minor): Power System Design: An Overhead Transmission Line to transmit 225 MW of Power to a distance of 200 km at 0.85 power factor lagging
- M.Tech Seminar I: Transient Stability and Voltage Regulation Enhancement via Co-ordinated Control of Generator Excitation and SVC
- M.Tech Seminar II: An Improved Starting Strategy for Voltage-Source Inverter Fed Three-Phase Induction Motor Drives under Inverter Fault Conditions.

Software Skills

- Known Softwares: Typhoon-HIL, Matlab/ Simulink, Scilab, Modelica, Visio.
- Language Known: C/C++ Programming

Extra-Curricular Activities

- Participation in debates, Urdu poetry
- Participation in quiz competition
- Playing badminton
- Computer games that require brain skills
- Reading storybooks.

Languages known

- ✓ English, Urdu & Hindi

Referees

1. **Prof. (Dr.) Atif Iqbal**
   Department of Electrical Engineering
   Qatar University, Qatar
2. **Prof. (Dr.) Pradip Kumar Sadhu**
   Department of Electrical Engineering
   IIT (ISM), Dhanbad
3. **Prof. (Dr.) S P Singh**
   Department of Electrical Engineering
   IIT Roorkee

(Ahmed Riyaz)