# Dr. Arvind Kumar Jain, Ph.D. (11TK)

Department of Electrical Engineering National Institute of Technology, Agartala (Tripura) Email:<u>arvindjmp@gmail.com</u>, <u>arvindj@nita.ac.in</u> Mobile: +91 9406576108



# Educational Qualifications:

- Ph. D. (2013) in Power System from Department of Electrical Engineering, Indian Institute of Technology(IIT), Kanpur, India.
- M.Tech. in "Power and Control" from Department of Electrical Engineering, Indian Institute of Technology (IIT), Kanpur, India.
- Bachelor of Engineering (B.E.) in Electrical Engineering, from Department of Electrical Engineering, Government Engineering College (GEC), Jabalpur, India.
- Higher Secondary (10+2) in PCM from Govt. Multi-Purpose Higher Secondary School (School of Excellence, Ministry of Education, GoI) Sagar (MP).

# <u>Awards/Scholarships:</u>

- Received Newton-Bhabha Fellowship, jointly sponsored by British council and SERB-DST, for attending advance training school on "Optimal Design and Control of Smart Community: New Ideas for off-grid Communities" November 07-17, 2016, Indian Institute of Technology Gandhinagar, Gujarat.
- Received Best Paper Award for the paper entitled "A Comparative Evaluation of PV Cable Length on Protection Scheme of Solar Photo Voltaic Systems Considering Pole to Pole Fault" International Conference on "Recent Challenges and Opportunities in Engineering" during 13-14 March, 2021, organized by the CTAE, Udaipur under TEQIP-III.
- Conferred with POSOCO Power System Award-2014 for doctoral research work. This award is jointly given by Power System Operation and Control Corporation (an ancillary of Power grid Corporation India Limited) and Indian Institute of Technology Delhi.

- Received All India Council of Technical Education (AICTE) Quality Improvement Programme (QIP) fellowship during M. Tech course.
- Received National Talent Search Scholarship during under graduate programme. This scholarship is given by MHRD, Govt. of India, for meritorious students.
- Received cash award of Rs, 2000/ from the Journal of CPRI for research paper "Coordinated bidding strategy of supplier in day-ahead and balancing energy market".
- Received Director Border Security Force Academy/ Vice-Chairman RJIT appreciation certificate for outstanding contribution in the development of the Institute.
- Received SRIJAN award for helping students to achieve Academic excellence. This award is jointly given by Madhya Pradesh Council of Science and Technology (MPCST) Bhopal and Sister Nivedita Takniki Siksha Society.
- Elevated to the grade of **IEEE Senior member**.

### <u>Teaching Experience:</u>

- > Working as **Professor** in the Department of Electrical Engineering, National Institute of Technology Agartala, Tripura from **26th February 2024 to continue**.
- > Worked as Associate Professor in the Department of Electrical Engineering, National Institute of Technology Agartala, Tripura from 29th April 2019 to 25th February 2024.
- Worked as Associate Professor in the Department of Electrical Engineering, Rustam Ji Institute of Technology, Border Security Force (BSF) Academy, Tekanpur, Gwalior from 01 July 2013 to 24 April 2019.
- Worked as Assistant Professor in the Department of Electrical Engineering, Rustam Ji Institute of Technology, BSF Academy, Tekanpur, Gwalior from 17 April 2000 to 30 June 2013.
- > Worked as Visiting Assistant Professor in the Department of Computing and Electrical Engineering, Indian Institute of Technology (IIT) Mandi (HP) Jan 2012 to June 2012.
- > Worked as Lecturer in the Department of Electrical Engineering, Government Polytechnic Ujjain from Feb 1997 to April 2000.

## Administrative Experience:

- Working as Head of Department, Electrical Engineering at NIT Agartala from 05/04/2024 to continue.
- > Worked as Chief Warden at NIT Agartala from 13.12.2021 to 03.04.2023.

Worked as Associate Dean (Planning and Development) at NIT Agartala from 18.11.2019 to 15.07.2020.

- > Worked as **Principal (Officiating)** at RJIT, BSF Tekanpur from **21.09.2016 to 15.04.2019**.
- > Worked as Dean Academics, at RJIT, BSF academy, Tekanpur from 14.06.2014 to 16.04.2018.
- > Worked as Chief Coordinator of Industry-Institute Partnership Cell (IIPC), funded by AICTE, New Delhi, from 01.08.2011 to 31.07.2013.
- Worked as Head of Department (HOD), Electrical Engineering, at RJIT, BSF academy, Tekanpur from 01.07.2012 to 14.06.2014.
- Worked as Member, Board of Governors (BOG) of RJIT, BSF academy, Tekanpur from 2013 to 2019.
- > Worked as **Presiding officer/Member** in admission committee, anti-ragging committee, selection committee and survey & quotation boards etc.

### <u>Research Interests:</u>

- Micro Grid
- Scheduling of Renewable Energy Sources
- Power quality assessment and classification
- Application of Artificial Intelligence in smart Grid
- Electricity market
- Demand Response in Smart Grid

### Courses Taught:

- Artificial Intelligence and Expert Systems
- Power System Economics and Control
- Power System Stability and Control

- Basics of Electrical Engineering
- Principles of Electrical Machines
- Control Systems
- Network Analysis
- Electric Power System Operation and Management Under Restructured Environment
- Electrical Machine Design

### List of Publications:

#### • Book:

- Arvind Jain, **Demand Response in Modern Power Grid**, ISBN: 978-613-7-43552-6, Academic Publishing, Germany (2019).
- Arvind Jain et al., Integrated Energy Systems: Design, Control and Operation, ISBN: 979-8-89113-206-1, Book ID: 23659, Nova Science Publishers, NewYork USA (2023).

#### Book Chapters:

- Arvind Jain "Machine Learning Applications in Smart Grid", in a book entitled "Optimal Planning and Operation of Distributed Energy Resources" ISBN 978-981-99-2799-9, Springer Nature Singapore(2023).
- Arvind Jain et al., "Transient Stability Analysis of off grid DC Micro grid", in a book entitled "Integrated Energy Systems: Design, Control and Operation", Book ID: 23659, Nova Science Publishers, NewYork USA (2023).
- Arvind Jain et al., "Steady-State Analysis of Self-excited Induction Generator to Enhance Reliability in Isolated Mode", in a book entitled "Reliability and Risk Assessment in Engineering" ISBN 978-981-15-3746-2, Springer Singapore(2020).
- Arvind Jain, "Optimal Decision Making under Uncertainty using Heuristic Approach in Restructured Power System" in the edited book entitled "Deregulated Electricity Market Structures and Smart Grid"ISBN:9781003278030,CRC Press, Taylor & Francis Publications, UK (2022).
- Arvind Jain, "Optimal Demand Response Strategy of an Industrial Customer" in the edited book 'Industrial Demand Response for Smart Grids: Methods, Best practices, Case Studies, and Applications'ISBN: 9781839535611, IET, UK (2022).

#### Research Papers:

- A.K. Jain et al, "Classification of Simultaneously Occurring Power Quality Disturbances using Deep Learning", IEEE Transactions on Automation Science and Engineering (Submitted)
- A.K. Jain et al, "An effective data-driven machine learning hybrid approach for fault detection and classification in a standalone low-voltage DC micro grid", Electrical Engineering (Springer), 2024, https://doi.org/10.1007/s00202-024-02334-7.
- A.K. Jain et al , "Optimal Design and Development of a Micro grid for Off-Grid Rural Communities", International Journal of Information Technology (Springer), 2024, 16(4), pp. 2229–2239.
- 4. A.K. Jain et al, "APuML: An efficient approach to detect mobile phising web pages using machine learning", Wireless personal communication, 125, pages3227–3248 (May,2022).
- A.K. Jain et al., "On-Board Single-Phase and Three-Phase Integrated Battery Charger for an Electric Vehicle" International Journal of Engineering and Technical Research (IJETR) , Volume-11, Issue-9, September 2021.
- A.K. Jain et al., "Optimal Placement of TCSC to Improve the Performance of Modern Power System," IOSR Journal of Electrical and Electronics Engineering, Volume 16, Issue 5 Ver. I, Oct. 2021, PP 16-25.
- A.K. Jain et al., "Design of Grid Connected Micro grid with Solar Photovoltaic Module" Volume-47, part-19, 2021, Pages 6971-6975, Materials Today: Proceedings, Elsevier, May, 2021.
- A.K. Jain, "Demand Response of an Industrial Buyer considering Congestion and LMP in Day-Ahead Electricity Market" International Journal of Emerging Electric Power Systems, Volume 20, issue 3, June, 2019.
- A.K. Jain et al., "Charging and Discharging of Membrane for Lithium Ion Battery Applications," International Journal of Innovative Technology and Exploring Engineering, Vol.8, Issue 6, April 2019, pp.1192-1194.
- 10. A.K. Jain et al., "Commercial Lithium ion Batteries and its Applications," Journal of Emerging Technologies and Innovative Research, Vol.6, Issue 3, March 2019, pp.608-609.

- A.K. Jain et al., "Enhancement of Voltage and Power System Stability Performance by Optimal Placement of UPFC," IOSR Journal of Electrical and Electronics Engineering, Volume 13, Issue 2 Ver. I, Mar. 2018, PP 24-27.
- A.K. Jain et al., "Price Responsive Demand Management of an Industrial Buyer in Dayahead Electricity Market," International Journal of Emerging Electric Power Systems, Volume 18, issue 1, Feb. 2017.
- 13. A.K. Jain et al., "Bacteria Foraging Optimization Based Bidding Strategy under Transmission Congestion," IEEE Systems Journal, Vol 9, No. 1, pp 141-151, 2015.
- A.K. Jain, "Bi-Level Optimization based Coordinated Bidding Strategy of a Supplier in Electricity Market," International Journal of Engineering Research and Development, Vol. 11, Issue 6, pp. 4-13, 2015.
- A.K. Jain et al., "Strategic Bidding in Transmission Constrained Electricity Markets using Artificial Bee Colony Algorithm," Int. Journal of Electric Power Components and Systems, Vol. 40, No. 16, pp. 1768-1788, Nov. 2012.
- 16. A.K. Jain et al., "Coordinated bidding strategy of supplier in day-ahead and balancing energy market," The Journal of CPRI, Vol. 7, No. 2, pp 223-234, Sept. 2011.
- A.K. Jain et al., "Strategic Bidding and Risk Assessment using Genetic Algorithm in Electricity Markets", International Journal of Emerging Electric Power Systems, Vol.10, Iss.5, 2009.
- Anindita Deb and A. K. Jain, "Design of a Robust and Fast Fault Diagnosis strategy of a Stand-alone LVDC Microgrid using Gaussian SVM & Weighted KNN algorithms" 3rd International Conference on Energy, Power and Electrical Engineering(EPEE-2023), September 15-17, 2023 Wuhan, China.
- M. V. A. Srikar, A. K. Jain and R. Debnath, "Voltage Harmonics and Transient Disturbances Detection and Classification using GoogLeNet Model of Deep Learning," 2023 IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, 2023, pp. 1-6, doi: 10.1109/SeFeT57834.2023.10245322.
- 20. A. Majumdar, A. K. Jain and R. Debnath, "Assessment of Transient Disturbance using Discrete Fourier Transform and Feed Forward Neural Network based Hybrid Classifier,"

2023 IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, 2023, pp. 1-6, doi: 10.1109/SeFeT57834.2023.10245639.

- 21. Arvind Kumar jain, Tapomay Debnath and Arup Ratan Bhoumik, Hospital Energy Management System for Enhancing Sustainability and Reliability of Power Supply, 2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA-2023), 24-25 Feb. 2023, NIT Meghalaya.
- Kriti Thakur and Arvind Kumar Jain, "Transient Stability Assessment of DC Microgrid using Nonlinear Decoupling Approach" 2022 IEEE Silchar Subsection Conference (SILCON), 04-06 Nov. 2022.doi.org/10.1109/SILCON55242.2022.10028865.
- Abhishek Deb and Arvind Kumar Jain, "Coordinated Charging Strategy of Electric vehicles using receding horizon technique to maintain the power quality of distribution grid, IEEE CATCON- 2022, 17-19 Dec. 2022, NIT Durgapur.
- 24. Tapomay Debnath; Arvind Kumar Jain; Arup Ratan Bhowmik, "Optimal Design of Grid Tied Hybrid Microgrid for Hospital to Enhance Reliability and Sustainability" 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET), 24-25 June 2022, NIT Patna. DOI: 10.1109/ICEFEET51821.2022.9848255.
- 25. A.K. Jain et al., "A Comparative Evaluation of PV Cable Length on Protection Scheme of Solar Photo Voltaic Systems Considering Pole to Pole Fault" International Conference on "Recent Challenges and Opportunities in Engineering" during 13-14 March, 2021, organized by the CTAE, Udaipur under TEQIP-III.
- 26. A.K. Jain et al., "Experimental Failure Analysis and Investigation of causes for 200 kVA, 11kV/415V Distribution Transformers" RARES 2021, Available on SSRN-Elsevier at https://hq.ssrn.com/conference=RARES2021.
- A.K. Jain, "Bi-Level Optimization Problem to Develop Optimal Strategy of a Generator in Competitive Environment" 20th international conference on Intelligent System Application to Power Systems (ISAP), 10-14 Dec. 2019, IIT Delhi. (Published by IEEE)
- A.K. Jain et al., "Structural and Morphological Study of Pure and Nano ZnO Doped PVK Samples for Separator in Lithium-ion Batteries, "International Conference on Advances in Nano materials and Devices for Energy and Environment, 27-29 January 2019 (ICAN-2019), Indian Institute of Information Technology and Management (ABV-IIITM),

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Gwalior.

- 29. A.K. Jain et al., "Synthesis and Characterization of Pure and Nano-ZnO Doped PMMA Films for Lithium-ion Batteries," International Conference on Advances in Nanomaterials and Devices for Energy and Environment, 27-29 January 2019 (ICAN-2019), Indian Institute of Information Technology and Management (ABV-IIITM), Gwalior.
- A.K. Jain et al., "Control and Techno-Economic Analysis of PV-Diesel-Battery Based Hybrid Microgrid System," published in proceedings of IEEE technically sponsored Conference on Information and Communication Technology 2017 (CICT 2017), November 3- 5, 2017, ABV-IIITM, Gwalior, Madhya Pradesh, India. (Published by IEEE)
- A.K. Jain et al., "Bacteria Foraging Optimization Algorithm based Strategic Bidding in Electricity Markets," National Power System Conference, IIT Guwahati, India, 2014. (Published by IEEE)
- A.K. Jain et al., "Artificial Bee Colony Algorithm Based Bidding Strategy under Transmission Constraint," International Conference on Power and Energy (ICPS-2013), 28-30 Oct. 2013, Institute of Engineering, Tribhuvan University, Kathmandu, Nepal.
- 33. A.K. Jain et al., "Demand Responsive Bidding Strategy of a Buyer in Uniform Price Electricity Markets," IEEE PES International Conference on Innovative Smart Grid Technologies (ISGT- 2011), Kollam, Kerala, India, pp. 268-273 Dec. 2011. (Published by IEEE)
- 34. A.K. Jain et al., "Genetic Algorithms based Optimal Bidding Strategy in Electricity Markets", presented in IEEE PES General Meeting held at Tampa, Florida, USA during 24-28 June 2007. (Published by IEEE)
- 35. A.K. Jain et al., "Parallel radial basis function neural network based fast voltage estimation for contingency analysis", Proceedings of International Conference on Electric Utility Deregulation and Restructuring and Power Technologies, Hongkong, April 5-8, 2004, pp 780- 784. (Published by IEEE)
- 36. A.K. Jain et al., "Implementation of artificial neural networks in real time power systems: Challenges and Issues", 5th Indian International Conference on Artificial Intelligence (IICAI-11) to be organized in Tumkur, India during December 14-16, 2011. (Avail. on: http://dblp.uni-trier.de/pers/hd/j/Jain:Arvind)

- 37. A.K. Jain et al., "Optimal Bidding Strategy under Transmission Congestion using Genetic Algorithm", Proceedings of International Conference on Genetic and Evolutionary Methods (GEM-2007), Las Vegas, USA 25-28 June 2007, pp. 88-94.(Avail. on: http://dblp.uni-trier.de/pers/hd/j/Jain:Arvind)
- 38. A.K. Jain et al., "Energy efficient clean and green IT: Concepts and Approaches", Proceedings of National Conference on Environment Protection, Tekanpur, March 17-19, 2010.
- A.K. Jain et al., "Optimal bidding strategy of generating companies in forward electricity markets", Proceedings of National Conference on Mathematical Modelling and Simulation (NCMMAS-09), IIITM, Gwalior, Jan. 9-11, 2009.

# M.Tech and Ph.D. Theses Guidance:

#### M.Tech:

S.N.	Title	Status
1	On-Board Single-Phase and Three-Phase Integrated Batter Charger for An Electric Vehicle	Completed (May-2020)
2	A Double Derivative Based Droop Controller for Improving Power Sharing in Inverter Based Autonomous Micro grid	Completed (May-2020)
3	Control of a photovoltaic integrated micro grid	Completed (May-2020)
4	A Hybrid Method using PID Controller for Islanding Detection of Micro grid	Completed (May-2021)
5	Impact of pv cable length on pole-to-pole fault and protecting it by using a solid-state fault current limiter	Completed (May-2021)
6	Optimal design of grid tied micro grid to enhance reliability and sustainability of power supply in a hospital	Completed (May-2022)
7	Coordinated Charging Strategy of Electric Vehicles Using Receding Horizon Technique To Maintain The Power Quality Of Distribution Grid	Completed (May-2022)
8	Development of demand response mechanism to reduce the impact of ev charging on distribution transformers	Completed (May-2022)
9	Transient stability assessment of dc microgrid using nonlinear decoupling approach	Completed (May-2022)
10	Classification of Simultaneously occurring multiple Power quality disturbances using Deep learning	Completed (May-2023)
11	Detection and classification of complex power quality disturbances using hybrid classifier	Completed (May-2023)
12	Analysis of grid tied micro grid of NIT Agartala campus considering faults	Completed (May -2024)

#### <u> Ph.D.</u>

S.N.	Title	Status
1	Optimal Scheduling of Renewable Energy Sources in Micro Grid	Awarded (2021)
2	Enhancement of Power System Performance using FACTs Controllers	Awarded (2022)
3	Development of fault diagnosis strategies for a stand-alone LVDC micro grid using Artificial intelligence	Ongoing
4	Detection and classification of power quality disturbances using Machine learning	Ongoing

## <u>Research & Consultancy Projects:</u>

S.N.	Title of project	Funding agency	Status
1	Industry-Institute Collaborative Research	AICTE, New Delhi	Completed
2	Methodology Development for Reducing Failure Rate of 200KVA, 11KV/440V Distribution Transformers	CRS, MHRD, GOI.	Completed
3.	Electrical drawing vetting and quality monitoring of multi storey residential and commercial buildings.	TUDA, Govt.of Tripura, Agartala	On going

### Professional Membership

- Senior Member IEEE (92692111)
- Life Membership of The Indian Society for Technical Education(ISTE-LM36164)
- Fellow Member of **The Institution of Engineers** (India) (FIEI-086934-4)
- Fellow Member of The Institution of Electronics and Telecommunication Engineers (IETE-FM202247)

### International/ National Events organized as Convener/Co- convener/Secretary

- 1. Organized a SERB-High End workshop on "Microgrids design, control, applications and challenges." from 16-22 January 2023 at NIT Agartala.
- Organized an ATAL-FDP on "Power Quality Disturbances in Smart Distribution Grid:Theories, Concepts and Solutions" from 13-24 March 2023, NIT Agartala, sponsored by AICTE, New Delhi.
- 3. Organized a SERB-High End workshop on "Grid Integration of Renewable Energy

Sources: Concepts, Issues and Solutions" from 16-22 January 2023 at NIT Agartala.

- Organized an ATAL-FDP on "Renewable Energy Sources: Challenges, Opportunities and Applications" from 23-27 November 2020, NIT Agartala, sponsored by AICTE, New Delhi.
- Organized a Short-term course on "Smart Energy Systems for Rural and Urban Development" from 2-6 December 2019 sponsored by sponsored by TEQIP-III, MHRD, GOI, and jointly organized by NIT Agartala (Tripura) and VNIT Nagpur (Mah.)
- Organized an FDP on "Fractional Calculus & Its Applications In Engineering" from 27-31 Jan. 2018 sponsored by sponsored by TEQIP-III, MHRD, GOI,
- Organized an FDP/STTP on "Soft Computing Techniques Using Matlab" during 5 9 March 2018 sponsored by NITTTR Chandigarh.
- Organized a Track on "Reliability Issues in Electrical Distribution Systems" in 1st International and 4th National Conference on Reliability and Safety Engineering (INCRS- 2018) Feb. 26-28, 2018, jointly organized by PDPM-Indian Institute of Information Technology, Design and Manufacturing Jabalpur and Society for Reliability and Safety (SRESA), Mumbai, India, 2018.
- 9. International conference on "Emerging Trends in Computer Science & its Application" April 7-8, 2015.
- National Symposium on "Challenges for Science & Technology in 21<sup>st</sup> century: National Perspective", under Science week, February 26-27, 2015.
- 11. Organized technical fest "TECHWIZARD-15" on 22-23 April 2015.
- 12. International conference on "Emerging Trends in Electrical & Mechanical Engineering" March 13-14, 2014.

### Short Term Training Courses Attended

- Participated in the Newton-Bhabha India-UK advanced training school (IUATS) on "optimal design and control of Smart community: New ideas for off-grid communities", 7-17 November, 2016, IIT Gandhinagar, India.
- Participated in Faculty Development Programme on "Promoting Quality in Higher Technical Education" held at Indian Institute of Information Technology and Management (IIITM) Gwalior, India during January 18-22, 2016.
- 3. Participated in the short-term training programme on "Reactive Power Management"

held at National Institute of Technical Teachers Training & Research (NITTTR) at Bhopal, India during June 02-06, 2014.

- DST-SERB school on "Smart transmission grid using synchro-phasor technology", at IIT Kanpur from 10.12.2014 to 14.12.2014.
- 5. Participated in the short-term course on "Effective Teaching and Classroom Communication" organized by RJIT, BSF, Tekanpur from 27.05.2013 to 01.06.2013.
- Participated in the training cum workshop on "Real Time Digital Simulator" held at IIT Kanpur during August 18-19, 2012.
- ISTE-Wipro sponsored Mission 10X workshop on "High impact teaching skills" conducted at GEC Gwalior from 26<sup>th</sup> April to 30<sup>th</sup> April 2010.
- QIP sponsored short term course on "Flexible AC Transmission Systems Controllers and Their Applications in Emerging Power Systems" organized by IIT Kanpur from 23.03.09 to 27.03.09.
- QIP sponsored short term course on "Electric Power System Operation and Control: Modern Tends and Future Challenges" organized by IIT Kanpur from 28.08.06 to 1.09.06.
- 10. QIP sponsored short term course on "Application of Matlab in Engineering" organized by IIT Kanpur from 16.05.06 to 31.05.06.
- Short term course on "Pedagogy and Teaching Skills" organized by Centre for Development of Technical Education, IIT Kanpur from 17.10.05 to 22.10.05.
- QIP sponsored short term course on "Intelligent Sensors and Control" organized by IIT Kanpur from 04.05.05 to 10.05.05
- AICTE and ISTE sponsored short term course on "ANN and Fuzzy logic application in Electrical Engineering" organized by Madhav Institute of Technology and Science, Gwalior from 19.01.04 to 25.01.04.
- QIP sponsored short term course on "Modern Trends in Power Electronics and Drives" organized by IIT Roorkee from 30.06.03 to 04.07.03.

#### **Invited Lectures/Talks/Chaired Session**

 Delivered an expert talk on "Application of AI and ML in Electrical and Electronics Engineering" held on 03 April, 2024 organized by Department of Electrical Engineering, BBIT, Kolkata in association with The Institution of Engineers (India), WBSC.

- Delivered an expert talk on "Smart Grid Technologies" on 6<sup>th</sup> July 2023at ICFAI University Agartala.
- 3. Chaired a paper presentation Session in at 22nd National Power System Conference held at Indian Institute of Technology Delhi during December 17-19, 2022.
- Chaired a paper presentation Session in 4<sup>th</sup> International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2019), organized by MITS, Gwalior, sponsored by Soft Computing Research Society, New Delhi, 19-20, November, 2022.
- Delivered an expert talk on "Overview of Electric Vehicles" on 28 May 2022 at Techno college of Engineering Agartala.
- Delivered an expert talk on "Research Publication Misconduct" in a National workshop on "Research and publication ethics" conducted by Department of Information Technology, Acropolis Institute Indore on 26 Feb.2022.
- Chaired a paper presentation Session in 3rd International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2019), organized by MITS, Gwalior, sponsored by Soft Computing Research Society, New Delhi, 13-14 November, 2021.
- 8 Delivered an expert talk on "Battery charging strategies for electric vehicles" in AICTE ATAL FDP on "Design and Optimization of EV Charging Technology in Smart Grid Platform" 13-17 September 2021, Puducherry Technological University, Puducherry.
- Chaired a paper presentation Session in TEQIP-III sponsored international conference "Recent Challenges and Opportunities in Engineering-2021" March 13-14, 2021 at CTE, MPUAT Udaipur (Rajasthan).
- Delivered an expert talk on "IOT based Active Demand Management in Smart Grid" 19-23 January 2021, AICTE sponsored, ATAL-FDP, Gautam Buddha University, Greater Noida, U.P.
- Delivered an expert talk on "Electric Vehicle" 5-10 April 2021, AICTE sponsored STTP at LNCT, Bhopal (MP).
- 12 Delivered an expert talk on "Charging Strategy for Electric vehicle", 3-7 August

2020, TEQIP-III sponsored STP at SVNIT Surat (Gujrat).

- Delivered an expert talk on "Demand Response and its role after Covid-19", 29th June, 2020, TEQIP-III sponsored STP at CTE, MPUAT Udaipur (Rajasthan).
- Chaired a paper presentation Session in 21st edition of the National Power Systems Conference (NPSC 2020) during 17-19 December 2020, IIT Gandhinagar (Gujrat).
- 15. Chaired a paper presentation Session in 2<sup>nd</sup> International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2019), Sponsored by AICTE and jointly organized by MITS, Gwalior, and Delhi Technological University, New Delhi on 18-19 December, 2020.
- 16. Delivered an invited talk on "Smart Grid" in International Conference on Engineering, Mathematical and Computational Intelligence, sponsored by TEQIP-III, MHRD, GOI, and jointly organized by Jabalpur Engineering College Jabalpur (MP), Walchand College of Engineering Sangli (Mah.) and FATER Academy of India during 21-23 December, 2019.
- 17. Delivered an expert talk on "Machine Learning in Smart Grid" in International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2019), Sponsored by AICTE and jointly organized by MITS, Gwalior, and Delhi Technological University, New Delhi on 2-3 November, 2019.
- 18. Chaired a paper presentation Session in International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2019), Sponsored by AICTE and jointly organized by MITS, Gwalior, and Delhi Technological University, New Delhi on 2-3 November, 2019.
- Delivered an expert lecturer on "Demand Response in Smart Grid" in a Shorttermtraining program on "SMART GRID AND DISTRIBUTED GENERATION TECHNOLOGIES" Under TEQIP – III, held on 8<sup>th</sup> to 9<sup>th</sup> March 2019 at Sagar Institute of Science Technology & Research, Bhopal.
- 20. Delivered an expert lecturer on "Solution of optimization problem using MATLAB", in a FDP on "Engineering Computations and GUI Development with MATLAB (EC- GuiD)", organized by E &ICT Academy, PDPM IIITDM Jabalpur (An initiative of Ministry of Electronics & Information Technology, Government of

India) during October 13-17, 2018.

- Delivered an expert lecturer on "Genetic Algorithm and its Application in Electricity Markets", AICTE sponsored short term course on Soft Computing Techniques and their Engineering Applications at Madhav Institute of Technology and Science, Gwalior, January 25 to Feb 05, 2014.
- 22 Delivered an expert lecturer on "Bacteria foraging optimization algorithm and its application in Electricity Markets" TEQIP phase-II sponsored short-term course on Nature inspired optimization techniques for engineering applications at Madhav Institute of Technology and Science, Gwalior, January 6-10, 2014.
- 23. Delivered an expert lecturer on "Artificial Bee colony algorithm-based bidding strategy and risk assessment" TEQIP phase-II sponsored short-term course on Nature inspired optimization techniques for engineering applications at Madhav Institute of Technology and Science, Gwalior, January 6-10, 2014.
- 24. Delivered an expert lecturer on "Price based Demand Response under Smart Grid" short term course on Recent Advances in Electrical Engineering" under TEQIP-II for the faculty and PG/Research students of Madhav Institute of Technology and Science (MITS), Gwalior, from 1- 5 March 2016.
- 25. Chaired session in National Conference on Energy and Environment: Threats and Remedies held at RJIT, BSF Tekanpur, and May 5-6, 2016.
- Chaired session in International conference on Emerging trends in Computer science & Its application" held at RJIT, BSF Tekanpur, and April 7-8, 2015.

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(Arvind Kumar Jain)