**HIMANSHU JAIN**

• Roorkee, India • +91 7668258484 • himanshu.jain@hre.iitr.ac.in

**EDUCATION**

* PhD, Electrical Engineering, Virginia Tech, Blacksburg, VA, USA, 2016, GPA-4.0/4.0

**Advisor:** Dr. Robert Broadwater

**Dissertation Title:** Dynamic Simulation of Power Systems using Three Phase Integrated Transmission and Distribution System Models: Case Study Comparisons with Traditional Analysis Methods

* Master of Science (MS), Electrical Engineering, The University of Texas at Arlington, Arlington, TX, USA, 2010, GPA-4.0/4.0

**Advisor**: Dr. Wei-Jen Lee

**Thesis Title:** Detection and Severity Classification of Rotor Imbalance Faults in Induction Machines

* B. Tech., Electrical Engineering, G. B Pant University of Agriculture and Technology, Pantnagar, India, 2008, GPA-9.0/10.0

**RESEARCH INTERESTS**

* Blackstart of bulk power and distribution systems using inverter-based generation resources.
* Grid reliability and resilience under very-high variable renewable energy penetration.
* Using machine learning to develop multi-timescale electrical loads models of end-use loads
* Cyber-physical systems modelling of distribution systems with high levels of distributed energy resources (DERs) such as wind, solar PV, and electric vehicles
* Developing software tools to improve the modeling accuracy of power grids under very-high variable renewable energy penetration.
* Hybridization of small hydro power with wind and solar PV resources to improve the quality of power delivery to off-grid communities for their sustainable development

**PUBLICATIONS & PRESENTATIONS SUMMARY**

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| --- | --- |
| **Attribute** | **Value** |
| **Total Citations** | 782 |
| **Peer Reviewed Journals** | 13 |
| **Peer Reviewed Conferences** | 22 |
| **Trade Publication** | 1 |

**PAPER REVIEW SUMMARY**

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| --- | --- |
| **Journal/Conference** | **# Papers Reviewed** |
| **IEEE Power Engineering Letters** | 1 |
| **IEEE Transactions on Power Systems** | 7 |
| **IEEE Transactions on Smart Grid** | 5 |
| **IEEE Transactions on Transportation Electrification** | 5 |
| **IET Generation, Transmission, and Distribution** | 8 |
| **Journal of Energy Engineering, ASCE** | 9 |
| **Energies** | 2 |
| **IEEE PES General Meeting** | 10 |
| **IEEE T&D Conference** | 5 |
| **IEEE Industrial Electronics Society Annual Conference** | 3 |
| **Total** | **55** |

**AWARDS**

* NREL’s Outstanding Mentor Award, 2020.
* NREL’s President’s Award for efforts in obtaining funding for research in the area of power system stability exceeding **$1 million (700 lakhs)**, 2019.
* Member of the Hierarchical Engine for Large-scale Infrastructure Co-Simulation (HELICS) team, which was a **finalist for the 2019 R&D100 Awards**, 2019.
* 2017 American Society of Civil Engineers (ASCE) **Outstanding Reviewer** award in recognition of outstanding service as a reviewer for the ASCE Journal of Energy Engineering, 2018.
* ICF **Certificate of Recognition** awarded for exemplary contribution to the success of the Energy, Environment, and Transportation Group and ICF International, 2012.
* Vice Chancellor’s gold medal for excellence in academics in the B. Tech degree program, 2009.

**RESEARCH AND INDUSTRY PROJECTS**

* Co-PI (PI from IIT Roorkee) for a project funded by the Grid Controller of India to study EMT-TS co-simulations for the bulk power system. IIT Bombay is leading the project and IISc and IIT Indore are other collaborators, 2025-present (**76 Lakhs**)
* PI for project funded by CPRI on blackstart using multiple grid forming inverters coupled with solar PV and Battery storage for improving the resilience of low voltage distribution systems, 2025-present, (**110 lakhs**)
* Co-PI on projected funded by ISEF, USA on identifying barriers and mitigation measures for development of pumped storage hydropower (PSP), developing business models for PSP, and identifying sites for off-river and sea-based PSP development in India, 2024-present, (**100 lakhs**)
* Co-PI on project titled USAID/India Higher Education Partnership for Disaster Resilient Infrastructure (HEP-DRI) that included development of UG/PG courses for designing, developing, and maintaining disaster resilient infrastructure. Closed in February 2025, (**500 lakhs**)
* PI on a project funded by Grid Controller of India titled “Optimization Studies for Hydropower Stations in Cascade for River Jhelum in J&K”, 2024-present, (**26 lakhs**)
* Co-PI on a project funded by New Venture Fund, USA titled “Development of National Scheme for Advanced grid-scale energy storage technologies”, 2022-2023, (**80 lakhs**)
* PI from India in a joint project led by the University of Colorado, Boulder, USA. Project is sponsored by Climate Change AI and it is titled “Machine Learning-based Dynamic Climate Projections for Power System Planning Datasets”; 2021-2023 (**18 lakhs**).
* Faculty Initiation Grant of IIT Roorkee for the project titled “*Multi-timescale Electrical Models of Buildings with high levels of Distributed Energy Resources*”. Developing a distribution systems research focused laboratory through this grant; 2021-present (**20 lakhs**).
* PI from NREL for a U.S. Department of Energy (DOE), Solar Energy Technologies Office (SETO) project that aims at obtaining grid services from behind-the-meter distributed energy resources; 2019 (**640 lakhs; $800,000**).
* PI for the “Blackstart Using Inverter-Based Resources” project under NREL’s lab-directed research and development (LDRD) program, 2019 (**240 lakhs; $300,000**).
* Task lead for the power flow and stability analysis task in a project with an electric utility; 2018 (**640 lakhs; $800,000**).
* Lead the solar PV variability modeling effort in the Multi-timescale Integrated Dynamics and Scheduling for Solar (MIDAS-Solar) project funded by SETO, 2018-2019.
* Lead the technical evaluation of challenges and opportunities of blackstart using solar PV and battery storage in the SETO-funded Solar Energy Innovation Network (SEIN) project, 2018-2019.
* Worked with a U.S. Investor-owned utility to determine the impact of very-high penetration levels of solar PV and battery storage on the stability of the power system. Impact of adding synthetic inertia to solar PV and battery storage on the stability of the power system was also investigated, 2018.
* Worked on a DOE sponsored grid modernization lab consortium (GMLC) project where my primary responsibility was to develop a HELICS-HLA interface. Hierarchical Engine for Large-scale Infrastructure Co-Simulation or HELICS is a co-simulation platform that was developed under this project. High Level Architecture or HLA is another co-simulation architecture that is widely used in the defense community, 2017-2018.
* Performed a study using MATLAB for a utility to calculate the temporary over voltage (TOV) on a section of a distribution feeder with large amount of PV generation. TOV resulted from reversal of power flow when a switch upstream opened to isolate the section of the feeder, 2014.
* Conducted studies in CYMDIST to assess the impact of integrating photovoltaics and electric vehicles on the distribution system. Used the prototype feeders developed by the Pacific Northwest National Laboratory (PNNL) to perform the analysis; prototype feeders were converted into CYMDIST acceptable format using Excel VBA, 2013.

**HARDWARE AND SOFTWARE DEVELOPMENT**

* Developing an Automation and Control Laboratory at the Department of Hydro and Renewable Energy, IIT Roorkee to conduct teaching and research in industrial automation and cyber-physical systems.
* Developed the Renewable Grid Integration Laboratory at the Department of Hydro and Renewable Energy, IIT Roorkee that enabled research on reliable and resilient grid integration of renewable energy.
* Developed a hardware testbed to emulate rotor imbalance faults in induction motors during my MS research. The set up involved installing vibration, current and voltage sensors on an induction motor, developing a wooden protective box around the motor, and programming LabVIEW-based data acquisition system to acquire sensor data.
* Set up SEL 710 motor protection relay for an undergraduate relay protection laboratory as a graduate teaching assistant.
* Developed the Three-phase Dynamics Analyzer (TPDA) program during my PhD to enable full three-phase integrated transmission and distribution simulations.
* Developed MAFRIT at NREL to enable extended-term dynamic simulations for studying frequency response of the grid under high renewable energy penetration.
* Developed the code to interface two co-simulation platforms – an implementation of the High Level Architecture (HLA) and the HELICS.
* Performed large-scale integrated transmission and distribution co-simulations on NREL’s high performance computer Peregrine using the Integrated Grid Modeling System (IGMS) developed at NREL.

**SOFTWARE PROFICIENCY**

OpenDSS, GridLAB-D, Cymdist, PSLF, PSS/E, EMTP, DEW, ATP, PSCAD, C++, Python

**ADVISING & MENTORING**

* Supervising 8, PhD students and 6, M. Tech students
* 4, M. Tech students have been awarded their degrees
* Mentored 5 PhD interns - Mentored 2 interns in summer of 2020, mentored 2 interns in summer of 2019, and 1 intern in summer of 2018.

**MACHINE LEARNING**

* Short-term load forecasting using (i) feedforward artificial neural networks (ANNs), (ii) radial basis function networks, and (iii) adaptive neuro fuzzy inference system (ANFIS).
* Sensor fusion to classify the severity of rotor imbalance fault in induction motors using (i) ANFIS, and (ii) Dempster Shafer theory.
* Identifying the dynamics of complex non-linear systems using feed forward ANNs.

**RESEARCH & PROFESSIONAL EXPERIENCE**

* **Assistant Professor, Hydro and Renewable Energy Department, IIT Roorkee, 2021-Present**

**Advising PhD and M. Tech students on following topics:**

* Grid-forming inverters in power systems
* Stability analysis of utility-scale power systems
* Grid services from behind-the-meter distributed energy resources
* Multi-time scale end-use load modelling using physics-based and data-based approaches
* Cyber-physical systems modelling
* Wireless charging of electric vehicles
* **Senior Research Engineer, NREL, Golden, CO, USA, 2020-2021**
* PI for projects and tasks worth **1520 lakhs** (**$1.9 million)**
* Obtain research funding for innovative ideas that advance grid reliability and resilience
* Focus on disseminating research through publications, presentations, and speaking engagements
* Mentor entry level engineers and interns
* Same research focus as under “Research Engineer” below
* **Research Engineer, NREL, Golden, CO, USA, 2017-2020**
* Modeling utility-scale transmission, distribution, and integrated transmission and distribution systems over multiple timescales – steady state and quasi-steady state (sec-hour), dynamics (milliseconds), and transients (microseconds) to analyze the impacts of high penetration levels of variable renewable energy resources on the reliability of power systems.
* Developing new approaches to improve the reliability and resilience of transmission and distribution systems with distributed and bulk power system connected inverter-based generation resources.
* **Summer Intern, NREL, Golden, CO, USA, 2015**
* Developed a software tool called the Multi-Area Frequency Response Integration Tool (MAFRIT) to simulate short and long-term power systems dynamics.
* **Senior Associate, ICF International, Fairfax, VA, USA, 2012-2013**
* Lead the effort to develop new capabilities at ICF to perform distribution feeder modeling and analysis.
* Lead a team of three to perform power systems studies to analyze the impact of transmission projects on the reliability of the electric grid.
* **Associate, ICF International, Fairfax, VA, USA, 2011-2012**
* Performed power systems studies to analyze the impact of transmission projects and DERs on the reliability of the electric grid.
* Reviewed and qualitatively assessed the impact of regulatory orders and electricity market rules on renewable energy development and transmission expansion.

**PUBLICATIONS (Total citations 782; h-index 13; i10 index 15– Google Scholar)**

**Peer Reviewed Journal Publications (Published)**

* H Varshney, **H Jain**, “Developing dynamic models of inverter-based motor loads using active probing-based system identification techniques”, Electric Power Systems Research, vol. 248, 2025. **Impact Factor – 4.2.**
* Z Mirza, **H Jain**, “Automated Fast Frequency Response From Inverter-Based Motor Loads”, IEEE Transactions on Smart Grid, vol. 16, 2025. **Impact Factor – 9.8**.
* H. Varshney, **H. Jain**, R. Tiwari, “Thermal-Electric Modeling: A New Approach for Evaluating the Impact of Conservation Voltage Reduction on Cooling Equipment”, Buildings 13 (5), 2023. **Impact Factor – 3.1.**
* A Singhal, P Arora, A Kumar, **H Jain**, AK Sharma, AC Bhosale, R Singh, SK Saini, D Rakshit, AKS Parihar, S Arora, “Integrated life cycle assessment and techno-economic analysis of grid-scale energy storage alternatives for India”, Sustainable Production and Consumption, vol. 54, 2025. **Impact Factor – 9.6.**
* J Cochran, P Denholm, M Mooney, D Steinberg, E Hale, G Heath, B Palmintier, D Keyser, D Oleson, D Arent, H Horsey, A Fontanini, M Muratori, J Jorgenson, V Ravi, B Cowiestoll, B Sigrin, K Horowitz, **H Jain**, M Irish, S Nicholson, G Ban-Weiss, H Cutler, “Integrated multimodel analysis reveals achievable pathways toward reliable, 100% renewable electricity for Los Angeles”, Cell Reports Sustainability, vol. 1, 2025.
* **H. Jain**, B. Mather, and A. Jain, “Grid Supportive Loads - A New Approach to Increasing Renewable Energy in Power Systems”, IEEE Transactions on Smart Grid, vol. 13, no. 4, pp. 2959-2972, July 2022, **Impact Factor – 9.8**
* R. Chakraborty, **H. Jain**, and G. Seo, “A Review of Active Probing-based System Identification Techniques with Applications in Power Systems”, International Journal of Electrical Power and Energy Systems, 140, 1-26, 2022, **Impact Factor – 5.0**
* **H. Jain**, B. Bhatti, T. Wu, B. Mather, and R. Broadwater, “Integrated Transmission-and-Distribution System Modeling of Power Systems: State-of-the-Art and Future Research Directions”, in *MDPI Energies*, 2021. **Impact Factor – 3.1**.
* A.K. Jain, K. Horowitz, F. Ding, K.S. Sedzro, B. Palmintier, B. Mather, and **H. Jain**, “Dynamic Hosting Capacity Analysis for Distributed Photovoltaic Resources - Framework and Case Study”, in *Applied Energy*, 2020. **Impact Factor – 9.746.**
* B-MS Hodge, **H Jain**, C Brancucci, et al, “Addressing Technical Challenges in 100% Variable Inverter-Based Renewable Energy Power Systems”, in *Wiley Interdisciplinary Reviews Energy and Environment*, e376, 1-19, 2020. **Impact Factor - 3.803.**
* **H. Jain**, R. P. Broadwater, M. Dilek, J. Bank, “Studying the Impact of Solar PV on Power System Dynamics using Integrated Transmission & Distribution Network Models,” in *Journal of Energy Engineering*, vol. 144, no. 1, 2017. **Impact Factor - 1.131.**
* Tbaileh, **H. Jain**, R. Broadwater, J. Cordova, R. Arghandeh, M. Dilek, “Graph Trace Analysis: An object-oriented power flow, verifications and comparisons”, in *Electric Power Systems Research* 147, 145-153, 2017. **Impact Factor - 3.414.**
* **H. Jain**, A. Parchure, R. P. Broadwater, M. Dilek and J. Woyak, "Three-Phase Dynamic Simulation of Power Systems Using Combined Transmission and Distribution System Models," in *IEEE Transactions on Power Systems*, vol. 31, no. 6, pp. 4517-4524, Nov. 2016. **Impact Factor - 6.663.**

 **Peer Reviewed Conference Publications (Published)**

* H. Varshney, and **H. Jain**, “A System Identification Approach for Modeling Inverter-Based Loads in Power System”, 2025 IEEE International Conference on Energy Technologies for Future Grids, Wollongong, Australia, December 7-11, 2025 (Accepted)
* U. Singh, and **H. Jain**, "Resilient Distribution System using Grid Forming Inverters", in proc. *8th International R&D Conference on Global Trends in Water, Power and RE Technologies*, Roorkee, India, 2024.
* V. Dubey, and **H. Jain**, "Modelling energy storage system for power system planning and operations", in proc. *8th International R&D Conference on Global Trends in Water, Power and RE Technologies*, Roorkee, India, 2024.
* A. Kumar, and **H. Jain**, "Timing & Synchronization of Hierarchical Engine for Large-scale Infrastructure Co-Simulation (HELICS): A case study", in proc. *8th International R&D Conference on Global Trends in Water, Power and RE Technologies*, Roorkee, India, 2024.
* S.M. Pathayapurayil, and **H. Jain** “Variable Speed Pumped Storage Hydropower Plant for Black Start”, in proc., *2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG),* Wollongong, Australia, 2023.
* P. Patidar, and **H. Jain**, “Design of Horizontally Aligned Six-Plate Capacitive Power Transfer for EV Charging Applications”, in proc., *2023 IEEE Transportation Electrification Conference and Expo*, Asia-Pacific (ITEC Asia-Pacific), Chiang Mai, Thailand, 2023.
* A. Kumar, and **H. Jain**, “A Framework for Cyber-Physical Simulation of Smart Grid”, in proc. *2023 First International Conference on Cyber Physical Systems, Power Electronics and Electric Vehicles (ICPEEV)*, Hyderabad, India, 2023.
* Z. Mirza, and **H. Jain**, “Implementing Grid Supportive Behavior in Induction Motor-Driven Loads using Field Oriented Control”, in proc., *2023 IEEE PES GT&D: IEEE PES Generation, Transmission & Distribution International Conference, and Exposition*, 2023.
* M. Kumar, S. Sen, **H. Jain**, and S. Diwania, “Optimal Planning for Building Integrated Microgrid System (BIMGS) for Economic Feasibility with Renewable Energy Support”, in proc., *2022 IEEE 10th Power India International Conference (PIICON), New Delhi*, 2022.
* R. Banerjee, A. Pandey, U.R. Pailla, G. Seo, **H. Jain**, Y. Lin, X. Wu, J. Bamberger, and U. Muenz, “Dynamic Microgrid Reconfiguration Using Grid-Forming Inverters and Smart Circuit Breakers”, in proc. *2022 IEEE Power and Energy Society General Meeting*, Denver, 2022.
* **H. Jain**, G. Seo, E. Lockhart, V. Gevorgian, and B. Kroposki, “Black Start of Power Grids with Inverter-based Resources”, in proc., *2020 IEEE Power and Energy Society General Meeting (PESGM),* Virtual Meeting, 2020.
* **H. Jain***, et al.*, “Quantifying Solar PV Variability at Multiple Timescales for Power Systems Studies”, in proc., *47th IEEE Photovoltaic Specialists Conference (PVSC),* Virtual Meeting, 2020*.*
* **H. Jain**, B. Palmintier, D. Krishnamurthy, I. Krad, and E. Hale, “Evaluating the Impact of Price-Responsive Load on Power Systems Using Integrated T&D Simulation,” in proc., *IEEE Innovative Smart Grid Technologies (ISGT) Conference 2019*, Washington DC, 2019.
* R.S. Biswas, J. Tan, **H. Jain**, V. Gevorgian and Y. Zhang, “Equivalent Test Bed in PSCAD and PSLF for Studying Advanced Power Systems Controller Performance”, in proc., *IEEE Innovative Smart Grid Technologies (ISGT) Conference 2019,* Washington DC, 2019.
* **H. Jain**, B. Palmintier, I. Krad, D. Krishnamurthy, “Studying the Impact of Distributed Solar PV on Power Systems using Integrated Transmission and Distribution Models,” in proc. 2018 *IEEE/PES Transmission and Distribution Conference and Exposition Conference and Exposition (T&D)*, Denver, CO, 2018.
* K. Rahimi, **H. Jain** and R. Broadwater, "Application of Distributed Series Reactors in relieving congestion costs," n proc., *2016 IEEE/PES Transmission and Distribution Conference and Exposition (T&D)*, Dallas, TX, 2016.
* **H. Jain**, K. Rahimi, A. Tbaileh, R. P. Broadwater, Akshay Kumar Jain and M. Dilek, "Integrated transmission & distribution system modeling and analysis: Need & advantages," in proc., *2016 IEEE Power and Energy Society General Meeting (PESGM)*, Boston, MA, 2016.
* **H. Jain**, A. Parchure, R. P. Broadwater, M. Dilek and J. Woyak, "Three phase dynamics analyzer: A new program for dynamic simulation using three phase models of power systems," in proc., *2015 IEEE IAS Joint Industrial and Commercial Power Systems / Petroleum and Chemical Industry Conference (ICPSPCIC)*, Hyderabad, 2015.
* K. Rahimi, **H. Jain**, R. Broadwater and J. Hambrick, "Application of Distributed Series Reactors in voltage balancing," in proc, *2015 IEEE Power & Energy Society General Meeting (PESGM)*, Denver, CO, 2015.
* **H. Jain**, K. Kumaraswamy and R. N. Maurya, "Plug-In Electric Vehicles - Distribution system impacts and high level screening methodologies for calculating costs and benefits," in proc., *IEEE Innovative Smart Grid Technologies* (*ISGT) Conference 2014*, Washington, DC, 2014.
* **H. Jain**, S. Korkua, W. Lee and C. Kwan, "Detection and Severity Classification of Rotor Imbalance Faults in Induction Machines,"in proc.*, 2010 IEEE Industry Applications Society Annual Meeting*, Houston, TX, 2010.
* S. Korkua, **H. Jain**, W. Lee and C. Kwan, "Wireless health monitoring system for vibration detection of induction motors," in proc., *2010 IEEE Industrial and Commercial Power Systems Technical Conference*, Tallahassee, FL, 2010.

**Trade Publication (Published)**

* E. Roseman and **H. Jain**, “Regional Differences in Order 1000 Cost Allocation. What does it mean?” World-generation, 2013 V.24 #5.

**Dissertation and Thesis**

* **H. Jain**, “Dynamic simulation of power systems using three phase integrated transmission and distribution system models: Case study comparisons with traditional analysis methods”, Ph.D Dissertation, Virginia Tech, Blacksburg, VA, November, 2016.
* **H. Jain**, “Detection and severity classification of rotor imbalance faults in induction machines”, MS Thesis, University of Texas at Arlington, Arlington, TX, August, 2010.

**PRESENTATIONS**

* **Several short-term training programs** organized as PI for NHPC officers and Government officers from India and Bhutan since 2022.Also delivered lectures on grid integration of renewable energy in these programs.
* **Paper presentation** **at the 2023 IEEE PES GT&D conference, Istanbul, Turkey**, 2023: Paper presented at the 2023 IEEE PES GT&D: IEEE PES Generation, Transmission & Distribution International Conference, and Exposition. Paper was titled “Implementing Grid Supportive Behavior in Induction Motor-Driven Loads using Field Oriented Control”.
* **Invited Lecture at the IEEE Industrial Applications Society Student Branch Chapter of IIT Roorkee, India, 2021.** Lecture’s topic was “Integration of High Levels of Variable Renewable Energy: Challenges and Opportunities”
* **Invited Lecture at REVA University, Bangalore, India, 2021.** Lecture’s topic was “Integration of High Levels of Variable Renewable Energy: Challenges and Opportunities”
* **Panelist at the Indian Association of Energy Economics - Introductory Debate on India’s Energy Transition – Aspirations, Preparedness and Way Forward, 2021.**
* **Invited speaker at the Northeast Power Coordinating Council (USA) DER Forum, 2021**. The presentation topic was “Blackstart using inverter - based resources”.
* **Paper presentation at the 2020 IEEE PES General Meeting** (Virtual Meeting due to Covid 19 Pandemic), **2020**: Paper presented was titled “Black Start of Power Grids with Inverter-based Resources”.
* **Paper presentation** **at the 47th** **IEEE PVSC Conference,** (Virtual Meeting due to Covid 19 Pandemic)**, 2020:** Paper presented was titled “Quantifying Solar PV Variability at Multiple Timescales for Power Systems Studies”.
* **Puerto Rico Energy Planning Resources Workshop**, **Puerto Rico, USA, 2019**: Presented the MAFRIT tool to various stakeholders in Puerto Rico, including university students, faculty, and industry members as part of a workshop organized under a DOE project to introduce tools that can help improve the reliability and resilience of Puerto Rico’s electric grid. (<https://www.nrel.gov/docs/fy19osti/73839.pdf>).
* **Poster presentation** **at the 2018 IEEE T&D Conference, Denver, CO, USA, 2018**: Poster presented was titled “Studying the Impact of Distributed Solar PV on Power Systems using Integrated Transmission and Distribution Models”
* **Panelist at the 2016 IEEE PES General Meeting, Boston, MA, USA, 2016**: Panel session was titled “Distribution Simulations at Varying Time Scales” and my presentation was titled “Three-Phase Dynamic Analysis of a Hybrid Transmission and Distribution Model: Impact of PV on Dynamics”
* **Paper and poster presentation** **at the 2016 IEEE PES General Meeting, Boston, MA, USA, 2016**: Paper presented was titled “Integrated transmission & distribution system modeling and analysis: Need & advantages”
* **Paper presentation** **at the 2015 IEEE IAS Joint Industrial and Commercial Power Systems / Petroleum and Chemical Industry Conference (ICPSPCIC), Hyderabad,** **India, 2015**: paper presented was titled “Three phase dynamics analyzer: A new program for dynamic simulation using three phase models of power systems”
* **Paper presentation** **at the 2015 IEEE PES General Meeting, Denver, CO, USA, 2015**: Paper presented was titled “Application of Distributed Series Reactors in voltage balancing”
* Presentation on the Distributed Engineering Workstation (DEW) software at the Central Power Research Institute (CPRI), Bangalore, India, 2015

**PROFESSIONAL AFFILIATIONS**

Member, IEEE

Member, IEEE-Power and Energy Society

Tau-Beta-Pi (Treasurer, Texas Eta Chapter, 2009-2010)