

PROFILE



Name : Dr. Prerna Jain
Date of Birth : Dec. 8th, 1974 (08-12-1974)
Present Post : Associate Professor,
Department of Electrical Engineering
Malaviya National Institute of Technology, Jaipur

Area of Specialization : Power Systems

Current Areas of Research : AI Applications to Power System, Deregulated Power System Operation in Smart Grid Environment, Power system Planning, Trading of Energy and Ancillary Services in Electricity Markets, Water and Energy nexus, Active and Reactive Power Forecasting, Renewable Energy Forecasting

Google Scholar Link : <https://scholar.google.co.in/citations?user=rpbhLYcAAAAJ&hl=en&oi=ao>

Personal Website : <https://www.pmresearch.in/prerna-jain>

Research Gate Link : <https://www.researchgate.net/profile/Prerna-Jain-7>

LinkedIn Link : <https://www.linkedin.com/in/dr-prerna-jain-53aa004/>

A. Academic Qualifications

S.No.	Degree	Institution	Year	Subjects Studied	Marks & Percentage	Remarks
1.	Ph.D.	MNIT Jaipur	2011-14	Deregulated Power Systems and Electricity Markets	-----	Awarded
2.	M. Tech.	MNIT Jaipur	1997-02	Power Systems Engg.	1408/2000, 70.4%	Div. - I/ Honours
3.	B. E.	M.B.M. Engg. College	1993-97	Electrical Engineering	3268/4475, 73.02%	Div. – I Honours
4.	Sr. Hr. Secondary	R.B.S.E., Rajasthan	1993	Hindi, English, Physics, Chemistry, Mathematics	515/650, 79.23%	Certificate of Merit (40th Rank- All Raj.)
5.	Secondary	R.B.S.E., Rajasthan	1991	Hindi, English, Science, Social Science, Mathematics, Sanskrit	444/550, 80.72%	Certificate of Merit (55th Rank- All Raj.)

B. Thesis

Ph.D.	Generator Companies' Strategic Bidding in Day-Ahead Electricity Markets
M. Tech.	A New Methodology for Fast Economic Load Dispatch using Hopfield Neural Networks
B. E	Recognition of Hand Written Alpha Numeric Characters using Adaptive Resonance Theory Neural Network (ART 2)

C. Experience in Department of Electrical Engineering, MNIT JAIPUR

1.	Associate Professor	Teaching & Research	14-5-2018 to till date
2.	Assistant Professor (8000 AGP)	Teaching & Research	20-1-2014 to 13-5-2018
3.	Assistant Professor (7000 AGP)	Teaching & Research	01.01.2006 to 19.01.2014
4.	Sr. Lecturer	Teaching & Research	16.03.2004 to 31.12.2005

5.	Lecturer	Teaching & Research	15.03.1999 to 15.03.2004
----	----------	---------------------	--------------------------

D. Courses Taught

Title & Course No.	Level (UG/PG)
Advanced Power Transmission and Distribution	UG
Power System Planning and Reliability	UG/PG
Basic Electrical Engineering	UG
Power System Restructuring, Deregulation and Economics	UG
Operation and Control of Power System (M. Tech)	PG
Transmission and Distribution of Electrical Power	UG
Electromagnetic Field Theory	UG
Electrical and Electronics Engineering	UG
Electrical Machine Design	UG
Network Theory	UG
Digital Electronics	UG
Control System Engineering	UG
Power Markets Economics and System Operation	PG
Power System Analysis	UG
Power System Operation in Restructured Markets	PG
Power Systems Management Laboratory	PG
Creative Arts /Sports/NSS	UG

E. Laboratories Engaged

Laboratory	Level
Control system lab	UG
M. Tech Lab I and II Autumn	PG
Computer-aided Power System Design Sessional	UG
Electrical Engineering LAB	UG
Power Systems Management Laboratory	PG
Power System Lab	UG

F. Thesis Supervised

Degree	Completed	On-going
Ph. D	02	04
M. Tech	34	04
B. Tech	19	01

G. Thesis Supervision (Ph.D)

S. No.	Student Name	Completion Year	Thesis Title
1.	Pranda Prasanta Gupta	2019	Stochastic Security Constrained Unit Commitment under Renewable and Storage integration
2.	Sharma Suman Dharampal	2020	Optimal Scheduling Of An Electric Vehicle Aggregator In Electricity Markets
3.	Navneet Sharma	Ongoing	Wind Forecasting
4.	Amit Kumar Sharma	Ongoing	Transactive Energy Management
5.	Abhishek Harit	Ongoing	Power System Flexibility Quantification
6.	Ashish Prajesh	Ongoing	Electricity Market Price Forecasting

H. Thesis Supervision (M. TECH.)

S.No.	Student Name	Completion Year	Thesis Title
1.	Jagdish Prasad Sharma	2004	A Fast Computation Hopfield Method to Economic Emission Dispatch Problem of Power System
2.	Sudhanshu Gupta	2008	Use of Hopfield Neural Network to accomplish Economic Load Dispatch of Power system with Piecewise Quadratic Cost Function of Generation.
3.	Ram Ratan	2012	Comparative study and Analysis of DGA Methods for Transformer Mineral Oil
4.	Divya Mathur	2011	Biogeography algorithm application to Economic load dispatch
5.	Shivani Kanoongo	2012	A new Hybrid BBO-PSO Technique to optimize Economic Emission Load dispatch problem
6.	Kailash Kr Sharma	2012	Wind Energy trading in Competitive Electricity Markets
7.	Shiv Kumar Sharma	2012	Non-iterative lambda logic-based algorithm for Economic load dispatch
8.	G.S.R Sanjeevni	2013	Optimal Bidding strategy using NSBBO
9.	Kritika Saxena	2014	Stochastic Coordinated GEP and TEP considering correlated generation and load
10.	Rahul Kumar Mali	2016	Distribution System Expansion Planning Considering Distributed Generation Integration
11.	Santosh Kumari	2017	Coordination of Energy Storage for Dynamic Distribution Network Expansion Planning Considering Load Uncertainty Using PSO with controlled Particle Movement
12.	Nandraj Choudhary	2016	Random Search Localized Biogeography Based Optimization for different Economic Load Dispatch Problems
13.	Yogesh Pandey	2019	Distribution System Expansion Planning under large EV integration
14.	Hemant Modi	2017	Impact of Distributed Generation on Distribution System Embedded with Electric Vehicles
15.	Sunil Jangid	2020	Smart Optimal Charging Scheduling of EVs for Workplace Parking-lot Operator (PLO)
16.	Dheeraj Verma	2020	Transmission System Congestion Management with Phase Shifter in a Renewable Integrated Hybrid System
17.	Sapna Ladwal	2020	Network Pricing Using LRIC for Customer Operated Distributed Networks
18.	Jitendra Kumar	2021	Market Based Congestion Management in the Distribution System under Electric Vehicle Integration
19.	Ajay Kumar Verma	2021	Wind Power Forecasting Using Back propagation Neural Network with accelerated learning
20.	Tejaswani Y	2021	Transactive Energy Integration in Rural Community for future Smart Grid
21.	Md. Kafi Anwar	2021	Solar Irradiance forecasting using Ensemble Approach based on Machine Learning
22.	Ashish Prajesh	2021	Mid Term Load Forecasting by LSTM Model of Deep Learning
23.	Madhu Shukla	2022	Allocation of RES and Dstatcom for the optimal Distribution System planning
24.	Pawan Tiwari	2022	Optimal Hybrid Energy Storage System Planning of Multi Energy System
25.	Rohan Ray	2022	Short Term Wind Power Forecasting using Wavelets, ARIMA and Neural Network
26.	Akanksha Pandey	2022	P2P Transaction based Sharing Solutions for Prosumers in the Management of Cloud Energy Storage Systems
27.	Sayida Nazam	2022	Short term load Forecasting using parallel LSTM-CNN network
28.	Kumari Aishwarya	2022	Coordinated Day Ahead Scheduling of Integrated Electricity-Natural Gas Systems with Microgrid
29.	Aditi Choudhary	2023	Electricity price forecasting using deep learning model based on attention

			mechanism.
30.	Puneet Paharia	2023	Stacked ensemble learning with heap based optimization for building energy consumption.
31.	Harshit Rathore	2023	Forecasting of EV charging behaviour using machine learning.
32.	Shivam Gupta	2023	Microgrid optimization using Bald Eagle Search Optimization.
33.	Swati	2023	Transactive energy management using cooperative game theory.
34.	Rishabh Gupta	2023	Co-optimisation of integrated power and water system.
35.	Mohammad Shaban	2024	100 % Renewable Cooperative Grid by Water Energy Nexus Interventions
36.	Poorvaja Verma	2024	Optimising Energy Consumption of Water Pumping Systems in Microgrid
37.	Deeopesh Kumar	2024	Multistage Framework for PV and Load Short-term Forecasting

I. Project Supervision (B. Tech.)

S. No.	Student Name	Completion Year	Project Title
1.	Amit Gaur, Ashutosh Gupta, Durga Lal Meena	2002-03	An Analog to Digital Converter using Hopfield Neural Network
2.	D.Duraisamy, K.Y.Singh, Tenzing Sherpa	2005-06	New Concepts of Cost Optimization for Thermal Scheduling
3.	Neha Jindal, Mansi Gupta, Kunal Mehlotra	2006-07	Implementation of AGC on FPGA kit
4.	Govindunath Patnala, Surjeet Adhikary, Vasudeva Krishna A.V	2007-08	New approach for solving optimization problems in ELD using Hopfield Networks
5.	Abhishek Dassani, Avinash Choudhary, Tarun Sharma	2008-09	Genetic algorithm-based unit commitment
6.	Bhuvanesh Kumar Goyal, Priyanka Rozra, Shreya Jha	2009-10	Application of Double Matrix Coded Genetic Algorithm to Unit Commitment
7.	Abhishek Singh, Ankur Sharma, Anurodh Sarker, Riddhi Mandal	2010-11	Combined Economic and Emission Dispatch Problems using Biogeography-based Optimization
8.	Arjit Agarwal, Nitin Gupta, Umesh Paliwal and Rohit Sharma	2011-12	Formulation of Bidding Strategy for thermal Generators using Monte Carlo Based Biogeography Based Optimization
9.	Manoj Kumar, Tushar Yadav, Munkesh Meena, Sunil Jhingonia	2012-2013	Statistical Characterization of Electricity Price in Indian Power Market and Bidding Strategy form price taker Genco in Competitive Electricity Market
10.	Hitesh Singh	2013-14	Optimal Bidding Strategies for Generation Companies using Particle Swarm Optimization
11.	Ankita Chaudhary, Mehul Mathur, Vijay Kumar Mahawar	2015-2016	System expansion planning with wind integration using AC model
12.	Omendra Gupta Rahul Katiyar, Rahul Agarwal, Ashutosh Vijayvargiya	2015-16	Smart Charging of Electric Vehicles
13.	Chandramouliswar, Piyush Kapoor, Rajneesh Kumar, Raunak Agrawal	2016-17	Risk-constrained Strategic Bidding of GenCos considering Demand Response
14.	Kushagra Gupta Ashok kumar , Rahul Barwal and Alok Kumar	2017-18	Smart Charging of Electric Vehicles for offices with Roof Top PVs
15.	Naresh Bhukya, Ashwini Kumar, Mohd. Ali, Avinash Aryan	2018-19	Fault identification and classification in overhead transmission line using Artificial Neural Network and Wavelet Transform
16.	Jaskaran singh, Himanshu Katewa, Aman sharma	2019-20	Retail electricity market model for active power distribution system
17.	Shubham kalla,Pranav kulshrestha, Aayushman Garg	2020-21	Deep learning based multi-step solar forecasting using sky images

18.	Rishabh dubey, Sneha Yadav, Punit saini	2022-23	Optimal Installation of Electric vehicle charging Stations
19.	Shuhani Agarwal, Rishabh, Samradh dhingra, Garima hardasani	2022-23	Electricity Price Forecasting.

J. Institute Service

Period	Designation	Nature of Responsibility
2009-10	Faculty Coordinator, Fine Arts (CACS)	Coordinate Student Activities, Administrative and Financial Responsibility
2015-16	Faculty Coordinator, Spic Macay (CACS)	Coordinate Student Activities, Administrative and Financial Responsibility
2016-17	Faculty Coordinator, Technical Society (CACS)	Coordinate Student Activities, Administrative and Financial Responsibility
2017-18	Faculty Coordinator, Technical Society (CACS)	Coordinate Student Activities, Administrative and Financial Responsibility, worked towards organizing the first edition of technical Fest “ SPHINX-2018”
2017-18 2018-19	Member, Women Cell	Analyzing and recommendations on the Women harassment cases at work place
2019-20	Faculty Coordinator, Spic Macay (CACS)	Coordinate Student Activities, Administrative and Financial Responsibility
2017-18	Faculty Coordinator, Technical Coordinator	Management of Technical Society Activities of Students
2019-22	Faculty Coordinator, Music and Spic Macay Society(CACS)	Management of student activities of Music and Spic macay Society
2022-till date	Associate Dean	Student's cultural activities management through various events and clubs
09-04-2022 to 11-04-2023	PI Incharge(CSAB-2022)	In charge of the Committee for admission through CSAB 2022 in MNIT Jaipur
2023-Till date	Co-PI Incharge(CSAB-2022)	In charge of the Committee for admission through CSAB 2022 in MNIT Jaipur

K. Department Service

Period	Designation	Nature of Responsibility
2006-2011	Coordinator, Department Annual Report	Information Compilation
2006-2008	Co-in charge, Power System Laboratory	Development of laboratory experiments and equipment
2006–June 2013	Department library coordinator	Compilation of recommended Books for Purchase for the Department
2009-2011	Co-incharge, I year Electrical Science Laboratory	Development of laboratory experiments and equipment
2003 till date	Programme Advisor	Advisory
2013	Coordinator, Department News Letter, “Corona”	Coordination
2015-2017	Member, DPGC	Advisory on matters related to M. Tech. and Ph. D
2014 - 2018(July)	Incharge, Control System Lab	Development of laboratory experiments and equipment
2018-19	Project In charge, B.Tech.	Coordination
2018-19	Coordinator, M. Tech (PSM)	Coordination
2018-20	Member, DPGC	Implementation of PG rules for smooth conduction of PG program and Ph.D. program.
17-07-2019- Till date	In charge, Power System Lab	Development of laboratory experiments and equipment
2019-21	Project In charge, B.Tech.	Coordination

2018-21	Coordinator, M. Tech (PSM)	Coordination
2019-(till date)	External member for DPGC, DSC and Guest Faculty Selection	To suggest on different issues pertaining to DPGC, DSC and Guest Faculty selection as per rules
July 2023-till date	Member , DPGC	Implementation of PG rules for smooth conduction of PG program and Ph.D. program.

Worked in many committees at the departmental level such as instrument purchase committee, department furniture purchase committee, organizing committee of the curriculum development workshop for B. Tech under reduce credit scheme, NBA accreditation committee etc.

L. Laboratory Development/Manual Design

1. Control Systems laboratory: MATLAB Based Practicals for UG Class in 2010 Updated the lab and prepared Manual for the lab in May 2013
2. Electrical Science Lab I year: Redesigned the lab and prepared the lab manual in 2010-2011.
3. Designed M. Tech (Power system) Lab in July 2009. Introduced 10 assignments based on hardware implementation and MATLAB Simulink and programming
4. Updated the M. Tech (Power system) Lab I in July 2010
5. Updated Control System Lab Manual in Feb. 2015
6. Worked towards introducing new practical and revision of Basic Electrical Engineering Lab Manual.
7. Designed M. Tech (Power system Mangement) Lab in July 2009. Introduced 10 assignments based on hardware implementation and GAMS Software

M. Publications

International Journal	Fourteen
International Conference	Forty
National Conference	Seven
Book Chapters	Five

International Journals

1. K. Chand Sharma, P. Jain, R. Bhakar, "Wind Power Scenario Generation and Reduction in Stochastic Programming Framework", in Electric Power Components and Systems, Volume 41, pp. 271-285, 2013, ISBN: 1532-5008.
2. P. Jain, R. Bhakar and S. N Singh, "Influence of Bidding Mechanism and Spot Market Characteristics on Market Power of a Large Genco Using Hybrid DE/BBO ", in Journal of Energy Engineering Volume :23 / 1-4 / 2014 ISBN: 1943-7897
3. P.P. Gupta, P. Jain, S. Sharma and R. Bhakar, "Security Constrained Unit Commitment in a Power System Based on Benders Decomposition and Mixed Integer Non-Linear Programming," International Journal of Engineering and Technology, vol. 7, pp.283-289, April 2018, Doi: 10.14419/ijet.v7i1.6.11265.
4. P.Prasanta Gupta, P. Jain, K.Chand Sharma, and R. Bhakar, "Stochastic scheduling of compressed air energy storage in DC SCUC framework for high wind penetration", in IET Generation, Transmission & Distribution, vol.13, issue 13, pp. 2747-2760, July 2019, Doi: 10.1049/iet-gtd 2019.0330
5. S. Sharma, P. Jain, "Integrated TOU Price-Based Demand Response and Dynamic Grid-to-Vehicle Charge Scheduling of Electric Vehicle Aggregator to Support Grid Stability", in International Transactions on Electrical Energy Systems, 06 August 2019, <https://doi.org/10.1002/2050-7038.12160>
6. P. Prasanta Gupta, P. Jain, K. Chand Sharma, and R. Bhakar, "Optimal Scheduling of Electric Vehicle in Stochastic AC SCUC Problem for Large Scale Wind Power Penetration", in International Transactions on Electrical Energy Systems , 17 July 2019, <https://doi.org/10.1002/2050-7038.12145>
7. P. Prasanta Gupta, P. Jain, S. Sharma, K. Chand Sharma and R. Bhakar, "Stochastic scheduling of battery energy storage system for large-scale wind power penetration," in The Journal of Engineering, vol. 2019, no. 18, pp. 5028-5032, 7 2019, doi: 10.1049/joe.2018.9350.
8. Pranda Prasanta Gupta, Vaiju Kalkhambkar, Kailash Chand Sharma, Prerna Jain, Rohit Bhakar, "Optimal electric vehicles charging scheduling for energy and reserve markets considering wind uncertainty and generator contingency" , International Journal of Energy Research (Wiley)

9. S. Sharma, P. Jain, "Risk-averse integrated demand response and dynamic G2V charge scheduling of an electric vehicle aggregator to support grid stability," in *International Transactions on Electrical Energy Systems*, DOI: 10.1002/2050-7038.12867, March 2021.
10. Pranda Prasanta Gupta, Vaiju Kalkhambkar, Kailash Chand Sharma, Prerna Jain, Rohit Bhakar, "Optimal electric vehicles charging scheduling for energy and reserve markets considering wind uncertainty and generator contingency" , *International Journal of Energy Research (Wiley)* Volume :1 / 1-24 / 2021
11. Gupta, Pranda Prasanta, Vaiju Kalkhambkar, Prerna Jain, Kailash Chand Sharma, and Rohit Bhakar, "Battery energy storage train routing and security constrained unit commitment under solar uncertainty" , *Journal of Energy Storage (Elsevier)* Volume :55 // 2022 DOI: <https://doi.org/10.1016/j.est.2022.105811>
12. Amit Kumar, Prerna Jain, Satish Sharma, "Transactive energy management for microgrids considering techno-economic perspectives of utility -a review" , *International Journal of Energy Research (Wiley)* Volume :46 (12) / 16127-149 / 2022
13. Navneet Sharma, Rohit Bhakar, Prerna Jain, "Optimal reconciliation of hierarchical wind power forecasts of correlated wind farms" , *Sustainable Energy, Grids and Networks (Elsevier)* Volume :35 / 101091 / 2023 DOI: <https://doi.org/10.1016/j.segan.2023.10109>
14. Suman Sharma, Prerna Jain, "Risk-averse integrated DR and dynamic V2G scheduling of parking lot operator for enhanced market efficiency" , *Energy (Elsevier)* Volume :275 / / 2023 DOI: <https://doi.org/10.1016/j.energy.2023.127428>

International Conferences

1. Prerna Jain, K. R Niazi, "Fast Economic Dispatch of Power System Using Hopfield Model", *International Power Engineering Conference (IPEC-2003)* by: IPEC at Singapore / 1-4 / 2003
2. Prerna Jain, K.R Niazi, "Using Hopfield Neural Networks for Economic Dispatch of Power Systems", *Power Engineering Conference 2003, PECon-2003* by: IEEE at Bangi, Malaysia / 5-10 / 2003 ISBN: 0-7803-8208-0
3. A. Rathi, A. Agarwal, A. Sharma and P. Jain, "A new hybrid technique for solution of economic load dispatch problems based on Biogeography Based Optimization," *TENCON 2011 - 2011 IEEE Region 10 Conference, Bali, 2011*, pp. 19-24, doi: 10.1109/TENCON.2011.6129055.
4. Abhishek Rathi, Arjit Agarwal, Anurag Sharma, and Prerna Jain, "A New Hybrid Technique for Solution of Economic Load Dispatch Problems Based on Biogeography Based Optimization", *TENCON-2011, IEEE Region-10 Conference* by: IEEE at Bali, Indonesia / 19-24 / 2011 ISBN: 978-1-4577-0256-3S.
5. Kanoongo and P. Jain, "Blended Biogeography Based Optimization for different economic load dispatch problem," *2012 25th IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Montreal, QC, 2012*, pp. 1-5, doi: 10.1109/CCECE.2012.6334983.
6. Shivani Kanoongo, Prerna Jain, "Blended Biogeography Based Optimization for Different Economic Load Dispatch Problem", *25th IEEE Canadian Conf. on Electrical and Computer Engineering (CCECE)*, by: IEEE at Montreal, Canada / 1-5 / 2012 ISBN: 978-1-4673-1432-9
7. Prerna Jain, Arjit Agarwal, Nitin Gupta, Rohit Sharma, Umesh Paliwal, and Rohit Bhakar, "Profit Maximization of a Generation Company Based on Biogeography Based Optimization", *Power and Energy Society General Meeting* by: IEEE PES at San Diego, CA / 1-6 / 2012 ISBN: 978-1-4673-2727-5
8. Pranda Prasanta Gupta, Prerna Jain, Suman Sharma, Rohit Bhakar, "A Benders Decomposition Approach: Security Constrained Unit Commitment in a Power System Using Mixed Integer Programming", *IEEE PES ISGT Asia 2018* by: IEEE at Singapore // 2018
9. Suman Sharma, Prerna Jain, Rohit Bhakar, Pranda Prasanta Gupta, "Time of Use Price Based Vehicle to Grid Scheduling of Electric Vehicle Aggregator for Improved Market Operations", *IEEE PES ISGT Asia 2018* by: IEEE at Singapore // 2018
10. Dheeraj Verma, Praveen Kumar Agarwal, Prerna Jain, "Congestion Management in Transmission System Using PST", *2021 IEEE PES/IAS Power Africa* by: IEEE at Nairobi, Kenya / 1-5 / 2021
11. Astha Mary John, Suraj Pant, Shreya Gupta, Yash Bhardwaj, Navneet Sharma, Archee Gupta, Priyanka Kushwaha, Rohit Bhakar, Prerna Jain, "Spatial Hierarchical Wind Power Forecasting", *2022 IEEE Power & Energy Society General Meeting* by: IEEE at Denver, CO, USA // 2022 ISBN: 1944-9933

12. Ashish Prajesh, Prerna Jain, Md. Kaifi Anwar, "Solar Irradiance Forecasting Using Ensemble Models of Machine Learning", 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies by: IEEE at Maldives / 1-6 / 2023.
13. Shivani Kannongo, Prerna Jain, "Biogeography Based Optimization for Different Economic Load Dispatch Problem with Different Migration Models", IEEE Students' Conference on Electrical, Electronics and Computer Science by: IEEE at Bhopal / 1-4 / 2012 ISBN: 978-1-4673-1516-6
14. Kritika Saxena, Prerna Jain and Rohit Bhakar, "Coordinated GEP and TEP Integrating Correlated Solar Generation and Load", Recent Advances and Innovations in Engineering (ICRAIE), 2014 by: IEEE at Jaipur, India / 1-5 / 2014 ISBN: 978-1-4799-4041-7
15. Rahul Kumar Malee, Prerna Jain, Pranda Prashant Gupta, Sharma Suman Dharampal, "Distribution System Expansion Planning Incorporating Distributed Generation", 7th Power India International Conference by: IEEE at Govt. Engineering College Bikaner, Rajasthan // 2016
16. Pranda Prasanta Gupta, Prerna Jain, Rohit Bhakar, "Reliability Security Constrained Unit Commitment Based on Benders Decomposition and Mixed Integer Nonlinear Programming", COMPTELIX 2017(International Conference on Computer, Communications and Electronics 2017) by: IEEE at Manipal University, Jaipur // 2017
17. Pranda Prasanta Gupta, Prerna Jain, Suman Sharma, Rohit Bhakar, "Security Constrained Unit Commitment in a Power System Based on Battery Energy Storage with High Wind Penetration", 2018 International Conference on Power, Instrumentation, Control and Computing (PICC) by: IEEE at Thissur, India // 2018
18. Suman Sharma, Prerna Jain, Rohit Bhakar, Pranda Prasanta Gupta, "Integrated TOU Price-Based Demand Response and Dynamic G2V Charge Scheduling of Electric Vehicle Aggregator", 2018 8th IEEE India International Conference on Power Electronics (IICPE) by: IEEE at Jaipur // 2018
19. Kritika Saxena, Rohit Bhakar, Prerna Jain, "Coordinated GEP and TEP Approach with Correlated Generation and Load", 2018 3rd International Conference and Workshops on Recent Advances and Innovations in Engineering (ICRAIE) by: IEEE at Jaipur, India // 2018
20. Santosh Kumari, Prerna Jain, Dipti Saxena, Rohit Bhakar, "Dynamic Distribution Network Expansion Planning Under Energy Storage Integration Using PSO", International Conference on Advanced Engineering Optimization Through Intelligent Techniques by: Springer at NIT Surat, Surat // 2018
21. Sharma Suman Dharampal, Prerna Jain, "Coordinated V2G Scheduling of EV Aggregator with Rooftop Solar Charging Park", 2nd International Conference on Large-Scale Grid Integration of Renewable Energy in India by: Ministry of New and Renewable Energy, Ministry of Power at New Delhi // 2019
22. Sharma Suman Dharampal, Prerna Jain, Rohit Bhakar, "Grid-to-Vehicle Smart Charging Strategies for Electric Vehicles Aggregator: A Review and Outlook", 8th International Conference on Power Systems (ICPS-2019) by: IEEE at MNIT Jaipur // 2019
23. Amita Sharma, Rohit Bhakar, H P Tiwari, Prerna Jain, "Distribution Network Pricing to Mitigate Uncertain Load Scenario", 8th International Conference on Power Systems (ICPS) by: IEEE at MNIT Jaipur // 2019
24. Dheeraj Verma, Anup Shukla, Prerna Jain, "COVID19: Impact on Indian Power Sector", Fifth IEEE International Conference on Recent Advances and Innovations in Engineering (IEEE-ICRAIE-2020) by: IEEE at Poornima University, Jaipur // 2020
25. Suman Sharma, Sunil Jangid, Prerna Jain, "V2G Scheduling for an EV Aggregator with Rooftop Solar Charging Park", AIP Conference Proceedings 2294 by: American Institute of Physics at New Delhi / 04004 / 2020
26. Suman Sharma, Sunil Jangid, Prerna Jain, "Stochastic Scheduling of Parking Lot Operator in Energy and Regulation Markets Amalgamating PBDR", 8th International Conference on Computing for Sustainable Global Development (INDIACom) by: IEEE at New Delhi // 2021
27. Y Tejaswini, Prerna Jain, "Transactive Energy Management of Solar Integrated Villages in India", 2021 IEEE 2nd International Conference on Electrical Power and Energy Systems (ICEPES) by: IEEE at NIT Bhopal / 1-6 / 2021 ISBN: 978-1-6654-0236-1
28. Akanksha Pandey, Prerna Jain, "P2P Transaction-Based Sharing Solution for Prosumers in Management of Cloud Energy Storage System", 10th Power India International Conference (PIICON 2022) by: IEEE at New Delhi, India // 2022 ISBN: 2642-5289

29. Harshit Rathore, Hemant Kumar Meena, Prerna Jain, "Application of Signal Processing and Machine Learning on Power Quality Disturbance with RE Penetration: A Review", 2022 IEEE 9th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering by: IEEE at Prayagraj, India // 2022
30. Harshit Rathore, Hemant Kumar Meena, Prerna Jain, "Prediction of EV Energy Consumption Using Random Forest and XGBoost" , 2023 International Conference on Power Electronics and Energy by :IEEE at Bhubaneswar, India // 2023
31. Rishabh Gupta, Prerna Jain, "A Review of Market Based Economic Dispatch in India for Uniform Electricity Pricing", 2023 International Conference on Power, Instrumentation, Energy and Control by: IEEE at Aligarh, India / 1-6 / 2023
32. A. Harit, P. Jain, S. Yamujala and R. Bhakar, "Quantification of Power System Flexibility: A Review", 2022 OPJU International Technology Conference on Emerging Technologies for Sustainable Development by: IEEE at Raigarh, Chhattisgarh, India // 2023
33. Harshit Rathore, Hemant Kumar Meena, Prerna Jain, "Forecasting of EVs Charging Behavior Using Deep Neural Networks", 2023 International Conference on Communication, Circuits, and Systems by: IEEE at BHUBANESWAR, India / 1-6 / 2023
34. Swati Sharma, Amit Kumar, Prerna Jain, "Green Hydrogen in India-Applications, Opportunities and Challenges" , 2023 1st International Conference on Intelligent Computing and Research Trends by :IEEE at Roorkee, India / 1-6 / 2023
35. Aditi Choudhary, Prerna Jain, Ashish Prajesh, " Wind Power Forecasting Using Deep Learning Method: A Review" , 2023 1st International Conference on Intelligent Computing and Research Trends by :IEEE at Roorkee, India / 1-6 / 2023
36. Puneet Pahadia, Prerna Jain, Abhishek Harit, Ashok Kumar Agarwal, "Resilience Metrics for Integrated Energy Systems: A Review", 2023 5th Biennial International Conference on Nascent Technologies in Engineering by: IEEE at Navi Mumbai, India / 1-6 / 2023
37. Aditi Chaudhary, Prerna Jain, Harshit Rathore, Hemant Kumar Meena, "Electricity Price Forecasting in Markets Considering Renewable and EV Penetration Using Machine Learning and DNN", 2023 5th International Conference on Energy, Power and Environment:Towards Flexible Green Energy Technologies by :IEEE at Shillong, India // 2023
38. Harshit Rathore, Hemant Kumar Meena, Prerna Jain, Aditi Choudhary, "Prediction of Session Duration of Electric Vehicle Using Machine Learning and Neural Networks", 2023 International Conference on Computer, Electronics & Electrical Engineering & Their Applications by: IEEE at Srinagar Garhwal, India // 2023
39. Swati Sharma, Prerna Jain, Anant Sant, Amit Kumar, "Fair Pricing in Transactive Energy Management for Peer-to-Peer Trading: A Shapley Value Analysis Using Game Theory", IEEE Sponsored 7th International Conference on Computer Applications in Electrical Engineering CERA 23 by: IEEE at IIT Roorkee, UP // 2023
40. Ashish Prajesh, Prerna Jain, Samradh Dhingra, Rishabh, Aisha Malik, Suhani Agrawal, "Short Term Electricity Price Forecasting by Optimized LSTM Model of Deep Learning with Genetic Algorithm", 7th International Conference on Computer Applications in Electrical Engineering - Recent Advances, CERA 2023 by: IEEE at IIT Roorkee, UP // 2023

National Conferences

1. Prerna Jain, K.R Niazi, "Hopfield Formulation for Fast Economic Load Dispatch of Power Systems" , National Seminar on Soft Computing Based AI Techniques by :JNV, Jodhpur at Jodhpur / 1-4 / 2004
2. Prerna Jain, Arjit Agarwal, Nitin Jain, Rohit Sharma, Umesh Paliwal, Rohit Bhakar, and S.N Singh, , "Genco's Profit Maximization Based on Biogeography-Based Optimization" , 17th National Power System Conference by :IIT BHU at Varanasi, India / 1-4 / 2012
3. Manoj Kumar, Tushar Yadav, Munkesh Meena, Sunil Kumar Jhingonia and Prerna Jain, "Statistical Analysis of Electricity Price in Indian Power Market", Advances & Research in Electrical System Technology (AREST'13) by: Arya Institute of Engineering & Technology, Jaipur at Jaipur, India / 41-46 / 2013
4. Suman Sharma, Prerna Jain, Rohit Bhakar, Pranda Prasanta Gupta, "Electric Vehicle Owner Preferred Smart Charge

Scheduling of EV Aggregator Using PV Generation", National Power Systems Conference (NPSC)2018 by :IEEE at NIT Trichy, Tiruchirapalli // 2018

5. Pranda Prasanta Gupta, Prerna Jain, Suman Sharma, Kailash Chand Sharma, Rohit Bhakar, "Scheduling of Energy Storage Transportation in Power System Using Benders Decomposition Approach", National Power Systems Conference (NPSC)2018 by: IEEE at NIT Trichy, Triuchirapalli // 2018
6. Madhu Shukla, Prerna Jain, "Allocation of Res and Dstatcom for the Optimal Distribution System Planning", 2022 22nd National Power Systems Conference by: IEEE at New Delhi // 2022
7. S Suman, R Katiyar, A Vijayvargiya, P Jain, R Bhakar, "An Optimally Controlled Charging Scheme Motivating EV Owners for Supporting Grid Stability 19-21 December, 2016.", National Power Systems Conference (NPSC) 2016 by: IEEE at IIT Bhubneshwar // 2016

Book Chapter

1. Gupta P.P., Jain P., Sharma S., Bhakar R. (2019) Security-Constrained Unit Commitment for Joint Energy and Reserve Market Based on MIP Method. In: Malik H., Srivastava S., Sood Y., Ahmad A. (eds) Applications of Artificial Intelligence Techniques in Engineering. Advances in Intelligent Systems and Computing, vol 697. Springer, Singapore
2. Kumari S., Jain P., Saxena D., Bhakar R. (2020) Dynamic Distribution Network Expansion Planning Under Energy Storage Integration Using PSO with Controlled Particle Movement. In: Venkata Rao R., Taler J. (eds) Advanced Engineering Optimization Through Intelligent Techniques. Advances in Intelligent Systems and Computing, vol 949. Springer, Singapore
3. Sharma S., Jain P., Gupta P.P. (2020) Risk-Averse G2V Scheduling of Electric Vehicle Aggregator for Improved Market Operations. In: Kalam A., Niazi K., Soni A., Siddiqui S., Mundra A. (eds) Intelligent Computing Techniques for Smart Energy Systems. Lecture Notes in Electrical Engineering, vol 607. Springer, Singapore
4. Book Chapter, "Integrated DR and V2G Framework of EV Aggregator Under Low Carbon Paradigm" ISBN:978-981-19-0588-9 published by - Springer Nature Singapore Year: 2022 authors- S Sharma, P Jain
5. Book Chapter, "Mid-Term Load Forecasting by LSTM Model of Deep Learning with Hyper-Parameter Tuning" ISBN:978-981-19-8742-7 published by - Springer Nature Singapore Year: 2022 authors- Ashish Prajesh, Prerna Jain, Satish Sharma

N. Research and Development Project as Principal Investigator

Sr. No.	Name	Period	Funding Agency	Grant in Aid
1.	Distribution Network Expansion Planning Mechanisms for State Utilities under large Integration of EVs and Distributed Energy Resources in Smart Grid Framework	3 years (Jan. 2018-Dec 2020)	DST, Rajasthan	8.96 Lacs

O. Short Term Course/ Faculty Development Program/Workshop organized:

1. One-week national short-term course on "Power System Restructuring and Electricity Markets" at MNIT Jaipur, Jaipur, India from December 19-23, 2011.
2. One-week national short-term course on "Smart Technologies for Power Management" at MNIT Jaipur, Jaipur, India from February 21-25, 2013.
3. One-week national level short-term course on "Trends and Challenges in Emerging Power System" at MNIT Jaipur, Jaipur, India from 19-10-2015 to 23-10-2015.
4. One-week national level short-term course on "DC Smart Grids: Renewable Integration, Energy Storage and System Operation" at MNIT Jaipur, Jaipur, India from 10-11-2016 to 14-11-2016.
5. One-week national level short-term course on "Big Data Analytics for Smart Grids" at MNIT Jaipur, Jaipur, India from 10-12-2016 to 14-12-2016.
6. One-week national level short-term course on "Intelligent Algorithms Application to Deregulated Power Systems" at MNIT Jaipur, Jaipur, India from 23-02-2018 to 27-02-2018
7. One-week national level short-term course on "Energy and Power System Optimization Using GAMS" at MNIT Jaipur, Jaipur, India from 08-01-2019 to 12-01-2019.
8. One-week national level short-term course on ""Restructured Electricity Supply System: Operation and Planning" at MNIT Jaipur, Jaipur, India from 15-03-2021to 19-03-2021.

9. National level Short Term Course on “Multi Agent and Micro Grid Concepts” at MNIT Jaipur, Jaipur, India from 02-06-2022 to 06-06-2022
10. International level Short Term Course on “Research Trends in Artificial Intelligence and Machine Learning for Engineering Challenges” at MNIT Jaipur, Jaipur, India from 06-12-2022 to 10-12-2022
11. International level Short Term Course on “Artificial Intelligence and Machine Learning for Engineering and Social Science Research” at MNIT Jaipur, Jaipur, India from 04-09-2023 to 08-09-2023.

P. Conference Organized

1. 8th IEEE International Conference of Power Systems in MNIT Jaipur, Jaipur, India during 20-12-2019 to 22-12-2019 in the capacity of Organizing Secretary

Q. MONOGRAPHS DESIGNED: Two

1. Prepared Monograph for one-week short term course on “Power System Restructuring and Electricity Markets” organized from December 19-23, 2011.
2. Prepared Monograph for one-week short term course on “Smart Technologies for Power Management” organized from February 21-25, 2013.

R. Invited Lectures:

1. Talk on “Deregulation of Electric Supply Industry: Necessity, Evolvement and Overview “in STC on "TRENDS AND CHALLENGES IN EMERGING POWER SYSTEMS " at MNIT Jaipur (Oct-2015)
2. Talk on “Electricity Market participants’ perspective and Bidding Strategy” in STC on " Trends and Challenges in Emerging Power Systems" at MNIT Jaipur (Oct-2015)
3. Talk on “Application of MATLAB for Power System Optimization: Laboratory Hands on Tutorials in STC on " Trends and Challenges in Emerging Power Systems" at MNIT Jaipur (Oct-2015)
4. Talk on “Differential Evolutionary Algorithm in STC on " Advanced Optimization Techniques" at MNIT Jaipur (May-2015)
5. Talk on “Smart Grids and Electricity Markets” in STC on "BIG DATA ANALYTICS FOR SMART GRID" at MNIT Jaipur (Dec-2016)
6. Talk on “Strategic Bidding of Generation Companies in Electricity Markets in FDP” on "Intelligent Algorithms Application to Deregulated Power System " at MNIT Jaipur (Feb-2018)
7. Talk on “Intelligent Algorithms Application for Strategic Bidding and Risk Management” in FDP on "Intelligent Algorithms Application to Deregulated Power System " at MNIT Jaipur (Feb-2018)
8. Talk on “Power System optimization using Evolutionary Techniques (Lab Class)” in FDP on "Intelligent Algorithms Application to Deregulated Power System " at MNIT Jaipur (Feb-2018)
9. Talk on “Distribution System Expansion Planning using Evolutionary Techniques (Lab Class)” in FDP on “Intelligent Algorithms Application to Deregulated Power System " at MNIT Jaipur (Feb-2018)
10. Keynote Address in International Conference on Role of ICT in Higher Education and Research at S S Jain Subodh P.G (Autonomous) College, Jaipur, India (Oct-2018) Edit
11. Chair on Session Chair in National Power System Conference (NPSC) -2018 at NIT Tiruchirappalli, Tiruchirappalli, Tamil Nadu, India (Dec-2018)
12. Talk on “Economic Load Dispatch in Power System” in FDP on "ENERGY AND POWER SYSTEM OPTIMIZATION USING GAMS" at MNIT Jaipur (Jan-2019)
13. Talk on “Security Constrained Unit Commitment in STC” on " Restructuring of Electrical System: Operation and Planning" at MNIT Jaipur (Mar-2021)
14. Talk on “Trading Strategies Electric Vehicle Aggregator for Multiple Markets” in STC on " Restructured Electricity Supply System: Operation and Planning" at MNIT Jaipur (Apr-2021)
15. Talk on “Security Constrained Unit Commitment Under Renewable And Storage Integration” in STC on " Restructured Electricity Supply System: Operation and Planning" at MNIT Jaipur (Apr-2021)
16. Talk on “Trading Strategies Electric Vehicle Aggregator for Multiple Markets” in STC on " Restructuring of Electrical Systems: Operation and Planning" at MNIT Jaipur (Mar-2021)
17. Talk on “Power System Deregulation: Structure, Economics and Role of Generation Companies” on 19/9/2017 at Swami Keshvanand Institute of Technology, Management and Gramothan.

S. Awards and Recognitions

1. Best Project Award for B.Tech. Thesis conferred by Department of Electrical Engineering, MBM Engineering College, Jodhpur.
2. Three of the M. Tech students received POSOCO Power System Award in M. Tech category. The award is

given by Power System Operation Corporation (POSOCO), Power Grid Corporation of India Ltd, in partnership with the Foundation for Innovation & Technology Transfer, IIT Delhi.

3. Award of US\$5170 for conducting IEEE CIS Summer School for given by IEEE Computational Intelligence Year - 2022
4. Award of US\$5200 for conducting IEEE CIS Summer School for given by IEEE Computational Intelligence Society Year - 2023
5. Her Research, Our Future (5 outstanding women Researchers of MNIT Jaipur) for given by Springer Nature Year - 2023

T. Event Attended:

1. International level Conference on 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT) at Maldives, Maldives, Maldives from 11-03-2023 to 12-03-2023
2. International level Conference on 2022 OPJU International Technology Conference on Emerging Technologies for Sustainable Development (OTCON) at O P Jindal, Raigarh, Chhattisgarh, India from 08-02-2023 to 10-02-2023
3. National level Conference on 22nd National Power System Conference at IIT Delhi, Delhi, India from 17-12-2022 to 19-12-2022
4. International level Conference on 9th IEEE UP section International Conference on Electrical, Electronics and Computer Engineering at IIIT Allahabad, Pragraj, India from 02-12-2022 to 04-12-2022
5. International level Conference on 2021 9th IEEE International Conference on Power Systems (ICPS) at IIT Kharagpur, Kharagpur, India from 16-12-2021 to 18-12-2021
6. International level Conference on 2nd IEEE International Conference on Electrical Power & Energy Systems at MANIT Bhopal and SLIET Longowal, Bhopal, India from 10-12-2021 to 11-12-2021
7. International level Conference on 2020 5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE) at Poornima University, Jaipur, India from 01-12-2020 to 03-12-2020
8. International level Conference on 8th International Conference on Power Systems at MNIT Jaipur, Jaipur, India from 20-12-2019 to 22-12-2019
9. National level Conference on National Power System Conference (NPSC) -2018 at held in NIT Tiruchirappalli, Tiruchirappalli, Tamilnadu, India from 14-12-2018 to 16-12-2018
10. International level Conference on 3rd IEEE International Conference on Recent Advances and Innovations in Engineering at Poornima College of Engineering, Jaipur, India from 23-11-2018 to 25-11-2018
11. International level Conference on International Conference on Role of ICT in Higher Education and Research at S S Jain Subodh P.G (Autonomous) College, Jaipur, India from 05-10-2018 to 06-10-2018
12. International level Conference on Advanced Engineering Optimization Through Intelligent Techniques at SVNIT, Surat, Surat, India from 03-08-2018 to 05-08-2018
13. International level Conference on International Conference on Innovative Smart Grid Technologies (ISGT Asia 2018) at NUS Singapore, Singapore, Singapore from 22-05-2018 to 25-05-2018
14. National level Conference on National Power System Conference (NPSC) - 2016 at IIT Bhubaneswar, India from 19 th -21st Dec.2016., India from 19-12-2016 to 21-12-2016
15. National level Workshop on Three Day National Workshop on Data Analytics at MNIT Jaipur, Jaipur, India from 21-05-2015 to 23-05-2015
16. International level Conference on 2014 IEEE 6th India International Conference on Power Electronics (IICPE) at NIT Kurukshetra, Kurukshetra, India from 08-12-2014 to 10-12-2014
17. International level Conference on IEEE TENCON 2011 at IEEE Indonesia, Bali, Indonesia from 22-11-2011 to 24-11-2011

U. Professional/ Extension Activities: Senior Member IEEE, USA, Member IEEE, Women in Engineering

1. Member of IEEE Power & Energy Society
2. Member of IEEE Woman in Engineering (WIE)
3. Member of IEEE Smart Grid Community
4. Senior Member of IEEE

V. Out Reach Activities

S.No.	Category	Name of Activity	Organization	Place	Position	Schedule
1	National	Executive Committee	IEEE Rajasthan Subsection	Jaipur	Executive Member	Feb-2020
2	National	Executive Committee	IEEE Rajasthan Subsection	Jaipur	Executive Member	Jan-2022
3	National	Expert Member	IIT Jodhpur	Jodhpur	Expert Member for Written & Skill Test for the post of Technical Superintendent	Aug-2023

Dr. Perna Jain