

RESEARCH PUBLICATIONS

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(Total Citation 566 and indices: h-index: 12 and i10-index: 14)

Book Chapters

1. Kalpesh Joshi, **Naran M. Pindoriya**, and Anurag Srivastava, book chapter on “Assessment and Optimization of Energy Storage Benefits in Distribution Networks” in IET book “Energy Storage at Different Grid Levels - Technology, Integration, and Market Aspects, 2018, ISBN: 978-1-78561-349-4
2. Kalpesh Joshi and **Naran M Pindoriya**, book chapter on “Integration of PV generation in unbalanced distribution network” in handbook of Distributed Generation, Springer International Publishing, 2017.
3. Rajasekhar Batchu, Kalpesh Joshi, and **Naran M. Pindoriya**, Book chapter on “Integration of Distributed Renewable Energy Generation with Customer-end Energy Management System for Effective Smart Distribution Grid Operation” in edited book titled “The Water-Food-Energy Nexus: Processes, Technologies and Challenges”, CRC Press, 2017.
4. Rajasekhar Batchu and **Naran M. Pindoriya**, Book chapter on “Residential Demand Response Algorithms: State-of-the-Art, Key Issues and Challenges”, in book titled, Wireless and Satellite Systems, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Vol. 154, Springer International Publishing, 2015.
5. **Naran M. Pindoriya**, Dipankar Dasgupta, Dipti Srinivasan, Marco Carvalho, “Infrastructure Security for Smart Electric Grid: A Survey”, book chapter in Optimization and Security Challenges in Smart Power Grid, Springer International Publishing, 2013.

Journals

1. Kalpesh Joshi, **Naran M Pindoriya**, and Anurag Srivastava, “A Two-Stage Fuzzy Multi-Objective Optimization for Phase-Sensitive Day-Ahead Dispatch of Energy Storage”, *IEEE Systems Journal* (Early Access), 2018.
2. Kalpesh Joshi and **Naran M Pindoriya**, “Advances in Distribution System Analysis with Distributed Resources: Survey with a Case Study,” *Sustainable Energy, Grids and Networks*, 2017 (In press)
3. G Rakesh and **Naran M Pindoriya**, “Improved Control Strategy for Bi-directional Single Phase AC-DC Converter in Hybrid AC/DC Microgrid”, *Electric Power Components and Systems*, vol. 45, no. 20, pp. 2293-2303, 2017
4. Kalpesh Joshi and **Naran M Pindoriya**, “Case-Specificity and its Implications in Distribution Network Analysis with Increasing Penetration of Photovoltaic Generation”, *CSEE Journal of Power and Energy Systems*, vol. 3, no. 1, March 2017.
5. **Naran M. Pindoriya**, Panida Jirutitijaroen, Dipti Srinivasan, and Chanan Singh, “Composite reliability evaluation using MCS and least squares support vector classifier”, *IEEE Trans. Power Systems*, vol. 26, no. 4, pp. 2483-2490, Nov. 2011. [Impact factor: 5.680]
6. **N. M. Pindoriya**, S. N. Singh, and S. K. Singh, “Application of adaptive wavelet neural network to forecast operating reserve requirements in forward ancillary services

- market," *Applied Soft Computing*, vol. 11, no. 2, pp. 1811-1819, March 2011. [Impact factor: 3.541]
7. **N. M. Pindoriya**, S. N. Singh, and S. K. Singh, "Multi-objective mean-variance-skewness model for generation portfolio allocation in electricity markets," *Electrical Power Systems Research*, vol. 80, no. 10, pp. 1314-1321, Oct. 2010. [Impact factor: 2.688]
 8. **N. M. Pindoriya**, S.N. Singh, and S.K. Singh, "Forecasting of short-term electric load using application of wavelet transforms with feed-forward neural network," *International Journal of Emerging Electric Power Systems*, vol. 11, no. 1, 2010.
 9. **N. M. Pindoriya**, S.N. Singh, and S.K. Singh, "An adaptive wavelet neural network- based energy price forecasting in electricity markets," *IEEE Trans. Power Systems*, vol. 23, no. 3, pp.1423-1432, Aug. 2008. [Impact factor: 5.680]
 10. **N. Pindoriya** and S.K. Shah, "Study of image classification accuracy of supervised neural network with traditional statistical methods of multi-temporal remotely sensed data," *IE (India) Journal - Electronics and Telecommunications*, vol. 86, pp. 54-60, Jan. 2006.

Conference Proceedings

1. Rishabh Abhinav and **Naran Pindoriya**, "Electricity Price Forecast for Optimal Energy Management for Wind Power Producers: A Case Study in Indian Power Market," *2018 PES IEEE Innovative Smart Grid Technologies Asia (ISGT Asia)*, Singapore, 22-25 May 2018.
2. Dhanapala Prudhviraaj, P.B.S. Kiran, and **Naran Pindoriya**, "Day-ahead Energy Management of a Microgrid with Battery Energy Storage Integration," *2018 PES IEEE Innovative Smart Grid Technologies Asia (ISGT Asia)*, Singapore, 22-25 May 2018.
3. Biswajeet Rout and **Naran Pindoriya**, "Active Distribution Network Analysis – A case Study," *2018 PES IEEE Innovative Smart Grid Technologies Asia (ISGT Asia)*, Singapore, 22-25 May 2018.
4. Vishal Kushwaha and **Naran Pindoriya**, "Very Short Term Solar PV Generation Forecast Using SARIMA Model", *IEEE 2017 7th International Conference on Power Systems (ICPS 2017)*, Pune, 21-23 Dec, 2017.
5. Shweta Dahale, Aakriti Das, **Naran Pindoriya** and S Rajendran, "An Overview of DC-DC Converter Topologies and Controls in DC Microgrid", *IEEE 2017 7th International Conference on Power Systems (ICPS 2017)*, Pune, 21-23 Dec, 2017.
6. Sambasivaiah Puchalapalli and **Naran Pindoriya**, "Study of Control Strategies for Active Power Filter for Harmonics Suppression", *IEEE 2017 7th International Conference on Power Systems (ICPS 2017)*, Pune, 21-23 Dec, 2017.
7. Rishabh Abhinav, **Naran Pindoriya**, Jianzhong Wu, and Chao Long, "Short-term wind power forecasting using wavelet-based neural network", *9th International Conference on Applied Energy (ICAE2017)*, 21-24 August 2017, Cardiff, UK.
8. Clement Lork, Yuren Zhou, Rajasekhar Batchu, Chau Yuen and **Naran M. Pindoriya**, "An Adaptive Data Driven Approach to Single Unit Residential Air-Conditioning Prediction and Forecasting using Regression Trees", *6th International Conference on Smart Cities and Green ICT Systems (SMARTGREENS)*, 2017, Porto, Portugal, 22-24 April, 2017.
9. Clement Lork, Batchu Rajasekhar, Chau Yuen and **Naran M. Pindoriya**, "How Many Watts: A Data Driven Approach to Aggregated Residential Air-Conditioning Load

- Forecasting", *2017 IEEE International Conference on Pervasive Computing and Communications Workshops*, Hawaii, USA, March 13-17, 2017.
10. P Bala Sai Kiran and **Naran M. Pindoriya**, "Study of Consumer Benefit Functions for Demand Response Algorithm", *19th National Power Systems Conference*, IIT Bhubaneswar, 19-21 December, 2016.
 11. G Rakesh and **Naran M Pindoriya**, "Simulation and Experimental Study of Bidirectional PWM AC-DC Converter for Microgrid Application", *1st IEEE Conference on Power Electronics, Intelligent Control and Energy Systems*, Delhi, July 2016.
 12. Rishabh Abhinav and **Naran M Pindoriya**, "Grid integration of wind turbine and battery energy storage system: review and key challenges", *6th IEEE International Conference on Power Systems (ICPS 2016)*, Indian Institute of Technology Delhi, Mar 4-6, 2016.
 13. Sambasivaiah Puchalapalli and **Naran Pindoriya**, "Harmonics assessment for modern domestic and commercial loads: A survey", *IEEE International Conference on Emerging Trends in Electrical, Electronics & Sustainable Energy Systems (ICETEES-16)*, Kamla Nehru Institute of Technology, Uttar Pradesh, Mar. 11 -12, 2016.
 14. Sreejith R., **Naran M Pindoriya**, and Babji Srinivasan, "A Novel Control algorithm based DSTATCOM for Load Compensation", *12th European Workshop on Advanced Control and Diagnosis (ACD2015)*, Pilsen, Czech Republic, November 19-20, 2015.
 15. Rajasekhar Batchu and **Naran Pindoriya**, "Multi-Stage Scheduling for a Smart Home with Solar PV and Battery Energy Storage – A Case Study", Accepted by *IEEE Innovative Smart Grid Technologies (ISGT) Asia 2015*, Bangkok, 4-6 Nov. 2015.
 16. Rajasekhar Batchu and **Naran Pindoriya**, "Decentralized Energy Management for a Group of Heterogenous Residential Customers", Accepted by *IEEE Innovative Smart Grid Technologies (ISGT) Asia 2015*, Bangkok, 4-6 Nov. 2015.
 17. Kalpesh Joshi and **N. M. Pindoriya**, "Day-Ahead Dispatch of Battery Energy Storage System for Peak Load Shaving and Load Leveling in Low Voltage Unbalance Distribution Networks", *IEEE PES General Meeting 2015*, USA, 26-30 July, 2015.
 18. Bharat Singh Rajpurohit and Naran M Pindoriya, "Embracing microgrids: applications for rural and urban India", *National Conference on Indian energy sector-Synergy with Energy*, AMA, Ahmedabad, May 2015.
 19. Batchu Rajasekhar and **N. M. Pindoriya**, "Optimal Energy Scheduling for a Smart Home Integrated with Solar PV and Battery Energy Storage", *Int. Conf. & Exhibition on Smart Grids and Smart Cities*, Indian Smart Grid Week (ISGW 2015), 3-5th March 2015, Bangaluru, India.
 20. Rohith Varier and **N. M. Pindoriya**, "A novel active anti-islanding protection scheme for grid-interactive roof-top solar PV system", in *the 18th National Power Systems Conference (NPSC-2014)*, IIT Guwahati, India, Dec. 18-20, 2014.
 21. Kalpesh Joshi and **N. M. Pindoriya**, "Reactive resource reallocation in DG integrated secondary distribution networks with time-series distribution power flow", in *IEEE International Conference on Power Electronics, Drives and Energy Systems (IEEE PEDES 2014)*, IIT Bombay, Mumbai, Dec. 16-19, 2014.
 22. Rahul Anand Kaushik and **N.M. Pindoriya**, "Power flow control of hybrid AC-DC microgrid using master-slave technique", in *2014 IEEE Conference on Energy Conversion (CENCON 2014)*, Johor Bahru, Malaysia, Oct. 13-14, 2014.

23. Gourav Kumar and **N.M. Pindoriya**, "Outage management system for power distribution network", in the *International Conference on Smart Electric Grid 2014*, KL University, India, Sep. 19-22, 2014.
24. Rahul Anand Kaushik and **N.M. Pindoriya**, "A Hybrid AC-DC Microgrid: Opportunities & Key Issues in Implementation", *IEEE international conference Green Computing, Communication and Electrical Engineering (ICGCCEE'14)*, India, 6-8 March, 2014.
25. Kalpesh Joshi and **N.M. Pindoriya**, "Risk Assessment of Unintentional Islanding in a Spot Network with Roof-top Photovoltaic System – A Case Study in India ", *Innovative Smart Grid Technologies - Asia 2013 (IEEE PES-ISGT Asia 2013)*, Bangalore, India, November 10-13, 2013.
26. Kalpesh Joshi and **N.M. Pindoriya**, "Impact Investigation of Rooftop Solar PV System: A Case Study in India," *2012 3rd IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*, Berlin, October 14-17, 2012, pp. 1-8.
27. **N. M. Pindoriya** and N. Gurrupu, "Emerging Trends in Electricity Market in India – A Review," in *Proc. of the 2nd International Conference on Current Trends in Technology, NUICONE 2011*, Institute of Technology, Nirma University, Ahmedabad, December 8-10, 2011, pp. 1-7.
28. Bharat Singh and **N.M. Pindoriya**, "Grid Integration of Large Scale Wind Power," in *Proc. of 7th National Conf. on Indian Energy Sector*, Ahmedabad, November 18-19, 2011.
29. Anupam Trivedi, **N. M. Pindoriya**, Dipti Srinivasan, and Deepak Sharma, "Multi-objective Evolutionary Algorithm for Day-Ahead Thermal Generation Scheduling," in *Proc. of the IEEE Congress on Evolutionary Computation*, New Orleans, USA, June 5-8, 2011, pp. 2170-2177.
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31. Anupam Trivedi, **N. M. Pindoriya** and Dipti Srinivasan, "Modified NSGA-II for day-ahead multi-objective thermal generation scheduling," in *Proc. of 9th International Power and Energy Conference (IPEC2010)*, Singapore, October 27-29, 2010, pp. 752-757.
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33. **N.M. Pindoriya**, S.N. Singh, and S.K. Singh, "One-step-ahead hourly load forecasting using artificial neural network," in *Proc. of the 3rd International Conference on Power Systems (ICPS-09)*, IIT Kharagpur, India, Dec. 27-29, 2009, pp.1-6.
34. **N.M. Pindoriya**, S.N. Singh, and S.K. Singh, "Optimal generation portfolio allocation in competitive electricity market," in *Proc. Of the 2009INDICON*, DA-IICT, Gandhinagar, Gujarat, India, Dec. 18-20, 2009, pp. 1-4.
35. **N.M. Pindoriya**, S.N. Singh, and J. Østergaard, "Day-ahead self-scheduling for thermal generator in competitive electricity market using hybrid PSO," in *Proc. of the 15th International Conference on Intelligent System Applications to Power Systems (ISAP 2009)*, Brazil, Nov. 8-12, 2009, pp. 1-6.

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37. **N.M. Pindoriya**, S.N. Singh, and S.K. Singh, "Forecasting the day-ahead spinning reserve requirements in competitive electricity market," in *Proc. of the 2008 IEEE PES General Meeting*, July 20-24, 2008, Pittsburg, PA, USA, pp. 1-8.
38. **N.M. Pindoriya**, S.N. Singh, and S.K. Singh, "Energy price forecasting in electricity markets: An overview and key issues," in *Proc. of the 2nd International Conference on Power Systems (ICPS-07)*, CPRI, Bangalore, India, Dec. 12-14, 2007.
39. **N.M. Pindoriya**, S.N. Singh, and S.K. Singh, "Short-term zonal load forecasting in PJM electricity market," *Student Paper Contest and Technical Symposium (SPCTS-2007)*, DAICT, Gandhinagar, Gujarat, India, Sep. 28-30, 2007 (awarded first prize for the best paper).