CURRICULUM VITAE

PRABODH BAJPAI

Associate Professor,
Department of Electrical Engineering, &
School of Energy Science and Engineering,
Indian Institute of Technology,
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Educational Qualifications

- Ph.D., Electrical Engineering. (Power Systems), 2008, Indian Institute of Technology, Kanpur (India).
  Topic: Development of Market Monitoring System and Swarm Intelligence Based Bidding Strategies in Electricity Markets.
- M. Tech., Energy Studies, 2001, Indian Institute of Technology, Delhi (India).
  Topic: Automatic Reactive Power Control of an Isolated Hybrid Power System.
- B. E., Electrical Engineering, 1997, Indian Institute of Technology, Roorkee (India).

Professional Experience

Duration	*Organization*	*Position*
Sept. 2015 till date	School of Energy Sciences and Engineering, Indian Institute of Technology, Kharagpur, WB, India	Joint faculty
July 2014 till date	Electrical Engineering Department, Indian Institute of Technology, Kharagpur, WB, India	Associate Professor
June 2008 to July 2014	Electrical Engineering Department, Indian Institute of Technology, Kharagpur, WB, India	Assistant Professor
July 2001 to July 2002	Electrical Engg. Department, Hercourt Butler Technology Institute, Kanpur, UP, India	Guest Lecturer

Publications & Patent

- International Journals : 27
- International & National Conferences: 46
- Book Chapters : 04
- Patent : 01

Research Interests

- Renewable Energy Systems
- Power System Restructuring
- Restructured Electricity Market
- Power System Operation, Control and Analysis

Awards

a) Bhaskara Advanced Solar Energy (BASE) Fellowship in School of Electrical Engineering and Computer Science, Washington State University (WSU) Pullman, USA from **May 8, 2015 to August 5, 2015** on the research theme of *Grid Interaction including Smart Grids.*

b) Sr. Research Fellowship in the Power Management Institute (PMI), National Thermal Power Corporation (NTPC), Noida, India from **July 2004 to July 2005** on the research theme of *Developing Power Trading Model for Indian Scenario*

c) The Institution of Engineers (India) Fellow, Membership No:F-1265438, in Electrical Engineering Division since April 2020

Work Experience

- RESEARCH EXPERIENCE

a) Sponsored Research.

1) Development and Integration of an Efficient MPC in Intelligent HMG Energy Systems (SERB India, Rs. 102 Lakhs), Co-PI: Dr. D. Kastha, Co-PI: Dr. Ashish Ranjan Hota, , DOS: Feb. 18, 2020, DOE: Feb. 17, 2023

2) Transmission line protection in the presence of bulk solar photo voltaic power plants (PBV), (CPRI India, Rs. 48.4 Lakhs), PI: Dr. A.K. Pradhan, Co-PI: Dr. Prabodh Bajpai DOS: July 23, 2019, DOE: July 22, 2021

3) Grid complaint Direct matrix converter fed DFIG based Wind power generator (GFG), (DST India, Rs. 59.8 Lakhs), PI: Dr. D. Kastha, Co-PI: Dr. Prabodh Bajpai, , DOS: July 17, 2019, DOE: July 16, 2022

4) UK India Clean Energy Research Institute (UKICERI), (DST India, Rs. 1247.83 Lakhs), PI: Dr. C. Chakarborthy, Co-PI: Dr. Prabodh Bajpai, DOS: April 5, 2017 DOE: April 4, 2021

5) Socializing the micro-solar dome: empowering marginalized rural SC communities through solar illumination and solar electricity ((DST India, Rs. 472.94 Lakhs), PI: Dr. P.P. Chakrabarti, Joint PI: Dr. Priyadarshi Patnaik, Dr. A.K. Pradhan, Co-PI: DR. J.N. Roy, Dr. Pallab Dasgupta, Dr. Pulak Mishra, Dr. Prabodh Bajpai, DOS: March 29, 2019, DOE: March 28, 2021

6) Socializing the micro-solar dome: empowering marginalized rural ST and tribal communities through solar illumination and solar electricity, (DST India, Rs. 684.98 Lakhs), Pr: Dr. P.P. Chakrabarti, Joint PI: Dr. Priyadarshi Patnaik, Dr. A.K. Pradhan, Co-PI: Dr. J.N. Roy, Dr. Pallab Dasgupta, Dr. Pulak Mishra, Dr. Prabodh Bajpai, DOS: March 29, 2019, DOE: March 28, 2021

7) Reconfigurable Distribution Network (DST India, Rs. 452 Lakhs), PI: Dr. Prabodh Bajpai, Co-PI: Dr. A.K. Sinha, and Dr. D. Kastha , DOS: Sept. 29, 2014, DOE: March 28, 2019

8) Stability and performance analysis of photovoltaics (DST India, Rs. 168 Lakhs), PI: Dr. C. Chakarborthy, Co-PI: Dr. Prabodh Bajpai, Dr. A.K. Sinha, DOS: May 17, 2011, DOE: May 16, 2014

9) Renewable Hybrid Energy Power Plant for Telecom station in Isolated Sites (Vodafone Essar-IIT Kgp Center of Excellence in Telecommunications (VICET), Rs. 95.00 Lakhs) PI: Dr. Prabodh Bajpai ; Co-PI: Dr. N. K. Kishore, Co-PI: Dr. C. Chakarborthy, DOS: May, 1, 2009, DOE: March 31, 2013

b) Consultancy.

1) Solar PV based DC Microgrid at NETRA (Client: NTPC Ltd., Value: 25.56 Lakhs; Period: 24 months, PI: Dr. P. Bajpai, Co-PIs: Dr. A.K. Pradhan), DOS: Jan. 5, 2017, DOE: July 7, 2020.

2) Vetting of design and scheme of 50kW rooftop solar power plant at MES Bamrauli (Client: Agni Power & Electronics Pvt. Ltd. Kolkata, Value**:** 1.534 Lakhs; Period: 1 month, PI: Dr. P. Bajpai, Co-PIs: Dr. A. Shaw), DOS: Nov. 15, 2018, DOE: Dec.15, 2018.

3) Vetting of design and scheme of 1 mwp solar power plant at MES Barrackpore (Client: Agni Power & Electronics Pvt. Ltd. Kolkata, Value: 3.68 Lakhs; Period: 1 month, PI: Dr. P. Bajpai, Co-PIs: Dr. A. Shaw), DOS: Sept. 7, 2018, DOE: Oct.5, 2018.

4) Estimation of technical transmission and distribution losses for NESCO, (Client: NESCO, Odisha, Value: 5.50 Lakhs; Period: 6 months PI: Prof. A. K. Sinha; Co-PIs: Dr. P. Bajpai, Dr. N. K. Kishore, Dr. A.K. Pradhan, DOS: Aug., 6, 2012, DOE: Feb. 6, 2013

5) Inspection cum Survey and Evaluation of Solar PV HLS installed in West Bengal through (Client: West Bengal Renewable Energy Development Agency

(WBREDA), Value: 5.50 Lakhs; Period: 3 months, PI: Prof. A. K. Sinha; Co-PIs: Dr. P. Bajpai, Dr. C. Chakraborty, Dr. A.K. Pradhan, DOS: May 15, 2009, DOE: Aug,.28, 2009.

- TEACHING EXPERIENCE

Theory/lab subjects taught in the Department of Electrical Engineering, **IIT Kharagpur** since June 2008**.**

1) Electrical Technology (EE11001)
2) Electrical Technology Lab (EE19001)
3) Measurements and Electronic Instruments (EE21004)
4) Measurements and Electronic Instruments Lab (EE29004)
5) Power System Lab (EE39002) (*New experiments included*)
6) Illumination and Electrical Utility Services (EE30024)
7) Energy Conversion Processes (EG30002)
8) Photovoltaic and Fuel Cells (EG31002)
9) Non-conventional Electrical Energy Systems (EE60049) (*New course developed*)
10) Renewable and Distributed Energy Systems (EE60005) (*New course developed*)
11) Smartgrid (EE60016) (*New course developed*)
12) Renewable Energy Sources (ES61007) (*New course developed*)
13) Energy systems modelling (ES61008)
14) Energy Systems Lab I (ES69007) & II (ES69008) (*New experiments included*)

- ADMINISTARTIVE EXPERIENCE:

A) Institute Activity

1) Advisory Committee member of Institute Works (IW) section (Since Sept. 2019)
2) Assistant Warden B. R. Ambedakar hall of residence (since May 2017)
3) Associate Professor-in-Charge, Electrical works (Jan 2014- Dec. 2018)
4) Assistant Warden Acharya J.C.Bose hall of residence (Oct. 2011- Oct.2013)
5) NSS Program officer (July 2011-June 2012)
6) Laboratory development in School of Energy Science & Engineering

B) Departmental Activity

1) Department representative for Central Library (Since 2019)
2) Department representative for Training program (2014-2016)
3) Building Infrastructure/ Physical facility/ Housekeeping In-charge (2013-2014)
4) Faculty advisor for EE students (2008-09 to 2011-12),
5) Energy Lab In-charge and Computer control Lab Co-In-charge, (Since 2009)
6) Time Table Co-In-charge (2009-2013)

C) Professional Activities

1) Secretary and Treasurer, 2011, IEEE Kharagpur Section
2) Vice Chair, 2012, IEEE Kharagpur Section
3) Chair, 2013, IEEE Kharagpur Section

D) Seminar / Conference Organization

1) Registration Chair in International Conference on 21st Century Energy Needs Materials, Systems and Applications (ICTFCEN), held at I.I.T. Kharagpur in Dec. 2016
2) Registration Chair in Third International Conference on Power Systems (ICPS 2009) held at I.I.T. Kharagpur in Dec. 2009
3) Registration Co-Chair in IEEE Region 10 Colloquium and Third International Conference on Industrial and Information Systems (ICIIS) held at I.I.T. Kharagpur, Dec. 2008.

- **Service rendered to other Institutes and Organizations:**

1. Guest Editor, IET Smart Grid Special Issue on Resilience
2. Solar System Consultant for Water resource Investigation and Development Department, Government of West Bengal
3. Invited Talks in various National Seminars, Technical sessions, Short term courses, Conferences and Workshop
4. Organizing Short Term Courses for Power utilities engineers of WBSEDCL, CESC and Tata Power at IIT Kharagpur Campus
5. Organizing International and National conferences and workshops in association with other Institutions
6. Technical paper review for various International and National publishing journals and conferences
7. Project proposal review and PhD and Master thesis review of research organization and academic Institutions
8. Mentorship and collaborative research activities with academic and R& D organizations

List of Publications

Papers in International Journal:

1. Ishita Biswas, Debaprasad Kastha, **Prabodh Bajpai**, "Small Signal Modeling and Decoupled Controller Design for a Triple Active Bridge Multiport DC-DC Converter", ***IEEE Transactions on Power Electronics***, Early Access, DOI**:** 10.1109/TPEL.2020.3006782, IF-7.224

2. S. Sinha and **P. Bajpai**, "Power Management of Hybrid Energy Storage System in a Standalone DC Microgrid" ***Journal of Energy Storage***, *Elsevior*, Volume 30, August 2020, https://doi.org/10.1016/j.est.2020.101523, *IF*- 3.517

3. W. Shao, Ruizhu Wu, Li Ran, H. Jiang, P. A. Mawby, D. J. Rogers, Tim C. Green, T. Coombs, K. Yardley, **P. Bajpai**, D. Kastha, Lin Zhou, "A Power Module for Grid Inverter with in-built Short-Circuit Fault Current Capability", ***IEEE Transactions on Power Electronics***, Vol. 35, Issue 10, pp. 10567-10579, Oct. 2020, DOI: 10.1109/TPEL.2020.2978656, IF-7.224

4. Priyanka Mishra, Ashok Kumar Pradhan and **Prabodh Bajpai**, "Adaptive Distance Relaying for Distribution Lines Connecting Inverter-Interfaced Solar PV Plant", ***IEEE Transactions on Industrial Electronics***, Early Access, **DOI:** 10.1109/TIE.2020.2975462, *IF-8.7*

5. Noel Richard Merritt, Chandan Chakraborty, **Prabodh Bajpai**, Bikash. C. Pal, "A Unified Control Structure for Grid Connected and Islanded Mode Operations of Voltage Source Converter based Distributed Generation Units under Unbalanced and Non-linear Conditions" ***IEEE Transactions on Power Delivery***, Early Access, DOI: 10.1109/TPWRD.2019.2952692, IF-4.42

6. M.Malakondaiah, Kalyan Kumar Boddeti, Bonu Ramesh Naidu, **Prabodh Bajpai**, "Second Harmonic Impedance Drift based Islanding Detection Method" ***IET Generation, Transmission & Distribution***, Vol. 13, Issue 23, pp. 5313 - 5324, Nov. 2019, IF-2.56

7. Priyanka Mishra, Ashok Kumar Pradhan and **Prabodh Bajpai**, "Voltage control of PV inverter connected to unbalanced distribution system", ***IET Renewable Power Generation***, Vol. 13, Issue 9, pp. 1587 – 1594, July 2019, IF-3.6.

8. Dinesh Varma Tekumalla Diptendu Pal, **Prabodh Bajpai**, "Comprehensive Performance Evaluation of Various Solar PV System Configurations", ***IET Renewable Power Generation,*** Volume 13, Issue 8, pp. 1261 – 1270, June 2019, IF-3.6.

9. W. Shao, Li Ran, H. Jiang, **P. Bajpai**, D. Kastha, Ruizu Wu, P. A. Mawby, Zheng Zeng, "Power module with large short-term current capability by using phase change material", ***IET, The Journal of Engineering,*** Vol. 2019 Issue. 16, pp. 3225-3229, Jan. 2019, IF-0.3.

10. Tanaya Datta, **P. Bajpai**, "An Adaptive Limiter for Unbalanced Operation of Doubly Fed Induction Generator Based Wind Energy System" ***International Journal of Renewable Energy Technology***, Inderscience, Vol. 9, No. 4, pp. 416-438, 2018, IF-0.12.

11. **P. Bajpai**, Sayonsom Chanda and Anurag K. Srivastava, “A Novel Metric to Quantify and Enable Resilient Distribution System using Graph Theory and Choquet Integral”, ***IEEE Transactions on Smart Grid***, Vol. 9, No. 4, 2918 – 2929, July 2018, IF-10.49.

12. Noel Merritt, Chandan Chakraborty and **P. Bajpai**, “New Voltage Control Strategies for VSC based DG Units in an Unbalanced Microgrid”, ***IEEE Transactions on Sustainable Energy,*** vol.8, no.3, pp.1127-1139, July 2017, IF-7.65.

13. Paresh K. Nayak, A.K. Pradhan, and **P. Bajpai, "**A Three-Terminal Line Protection Scheme Immune to Power Swing”, ***IEEE Transactions on Power Delivery***, Vol. 31, No. 3, pp.999-1006, June 2016, IF-4.42.

14. **P. Bajpai**, and Vaishalee Dash, “Power Management Control Strategy for a Stand-alone Solar Photovoltaic-Fuel Cell-Battery Hybrid System” ***Sustainable Energy Technologies and Assessments,*** vol.9, pp.68-80, 2015, IF-3.46.

15. Paresh K. Nayak, A.K. Pradhan, and **P. Bajpai,** "Secured Zone 3 Protection During stressed Condition” ***IEEE Transactions on Power Delivery***, vol.30, no.1, pp: 89-96, 2015, IF-4.42.

16. Paresh K. Nayak, A.K. Pradhan, and **P. Bajpai**, "Wide-Area Measurement Based Backup Protection for Power Network with Series Compensation", ***IEEE Transactions on Power Delivery***, vol.29, no.4, pp: 1970 - 1977, 2014, IF-4.42.

17. Ashish R. Hota, and **P. Bajpai**, "Decentralized Operation of Residential Energy Resources in the Smart Grid", ***International Journal of Renewable Energy Technology*** Vol. 5, No. 1, pp.55-76, 2014

18. Ashish Ranjan Hota, Mahesh Juvvanapudi and **Prabodh Bajpai**, "Issues and Solution Approaches in PHEV Integration to Smart Grid", ***Renewable & Sustainable Energy Reviews Elsevier***, Vol. 30, pp. 217-229, February 2014, IF-10.56.

19. Zubin Japa Balan and **P. Bajpai**, "Optimal Load Scheduling Within a Microgrid Including Reliability Aspects", ***International Journal of Smart Grid and Clean Energy***, Vol. 2, No. 3, pp. 343-349, October 2013, IF-0.5.

20. Paresh K. Nayak, A.K. Pradhan, and **P. Bajpai**, "A Fault Detection Technique for Series Compensated Line during Power Swing", ***IEEE Transactions on Power Delivery***, vol.28, no.2, pp.714-722, April 2013, IF-4.42.

21. Ashish R. Hota, **P. Bajpai** and Dilip Pratihar, "Evolutionary Neural Networks for Strategic bidding in Electricity Markets", ***International Journal of Energy Sector Management, Emerald,*** Vol.6, Issue 3, pp.321 - 342, Sept. 2012, IF-0.9.

22. **P. Bajpai** and Vaishalee Dash, "Hybrid Renewable Energy Systems for Power Generation in Stand-alone Applications: A Review" ***Renewable and Sustainable Energy Reviews, Elsevier,*** Vol. 16, Issue 1, pp. 2926-2939, January 2012, IF10.56.

23. Ranjay Das, **P. Bajpai** and A. K. Sinha' "Dynamic Interaction of Renewable Hybrid Power Plant with Grid", ***Renewable Energy and Power Quality Journal*** (REPQJ), Vol.9, 2011

24. **P. Bajpai**, and S. N. Singh, "Effective Market Monitoring System for Surveillance of Indian Electricity Market", ***Special Issue of International Journal of Energy Sector Management.*** Vol. 3, Issue 2, pp. 275-292, September 2009, IF-0.9.

25. **P. Bajpai**, Shiva Kr. Punna and S. N. Singh, "Swarm Intelligence Based Strategic Bidding in Competitive Electricity Markets", ***IET Generation, Transmission & Distribution,*** vol. 2, No. 2, pp. 175-184, March 2008, IF-2.56.

26. **P. Bajpai**, and S. N. Singh, "Strategic Bidding in Network Constrained Electricity Markets Using FAPSO", ***International Journal of Energy Sector Management*** vol. 2, Issue 2, , pp. 274-296, March 2008, IF-0.9.

27. **P. Bajpai**, and S. N. Singh, "Fuzzy Adaptive Particle Swarm Optimization for Bidding Strategy in Uniform Price Spot Market", ***IEEE Transactions on Power System***, vol. 22, No. 4, pp. 2152-2160, November 2007, IF-6.81.

Papers in Conference/Seminar Papers:

(a) International

1. Priyanka Mishra, Ashok Kumar Pradhan and **Prabodh Bajpai**, "TAB based Multiport Converter with Optimized Transformer RMS Current and Improved ZVS Range for DC Microgrid Applications", **9th International Conference on Power and Energy Systems (ICPES**), Perth, Australia, December 2019

2. Ishita Biswas, D. Kastha, **Prabodh Bajpai**, "Control of Triple Active Bridge Based Multiport Converter for DC Microgrids**, IECON**, Lisbon, Portugal, October 2019

3. S. Sinha, Dinesh Varma Tekumalla and **P. Bajpai**, "Fuzzy Logic Controlled Power Sharing Among Energy Storage Devices in Multiple Standalone DC Microgrids", 2019 IEEE PES **Innovative Smart Grid Technologies Europe (ISGT-Europe), Romania.** October, 2019**.**

4. S. Sinha and **P. Bajpai**, "Fuzzy Logic Controlled Power Sharing Among Energy Storage Devices in Multiple Standalone DC Microgrids", IEEE PES **Innovative Smart Grid Technologies (ISGT) Europe**, Romania, 29 Sep.- 2 Oct, 2019

5. Weihua Shao, Ruizu Wu, Li Ran, Huaping Jiang, Tom Combs, Kieran Yardley, Philip Mawby, **Prabodh Bajpai** and Debaprasad Kastha, "Enhanced Over Current Capability and Extended SOA of Power Modules Utilizing Phase Change Material", ***IEEE Energy Conversion Congress and Exposition (ECCE)***, Maryland, USA, Sept.29 –Oct. 3, 2019.

6. B. Ramesh Naidu, G. Panda, **P. Bajpai** and B. Chittibabu "Hardware-in-Loop Validation of the Current Control Employed for a Fuel Cell-Supercapacitor DC System", in ***IEEE PES Innovative Smart Grid Technologies (ISGT) Conference***, Singapore, 2018.

7. T. Datta, **P. Bajpai** and B. Ramesh Naidu, "Active Perturbation based Islanding Detection Scheme for Grid Connected Wind Energy System", in ***IEEE PES Innovative Smart Grid Technologies (ISGT) Conference***, Singapore, 2018.

8. Ishita Biswas, and **Prabodh Bajpai**, "Decentralized control strategy for PV based DC microgrid with hybrid storage", ***Asia Conference on Power and Electrical Engineering (ACPEE*),** Bangkok, Thailand, March 2016.

9. Noel Richard Merritt, Chandan Chakraborty and **Prabodh Bajpai**, "A Control Strategy for Islanded Operation of a Voltage Source Converter (VSC) Based Distributed Resource Unit under Unbalanced Conditions", ***IEEE International Conference on Industrial Informatics (INDIN),*** Cambridge, UK, July 2015.

10. **Prabodh Bajpai**, and Akshat K. Sinha, "Swarm Intelligence Based Optimal Sizing of Solar PV, Fuel Cell and Battery Hybrid System", ***International Conference on Power and Energy Systems*** (ICPES 2012), Hong Kong, China, April, 2012

11. **Prabodh Bajpai**, Sowjan Kumar and N. K. Kishore, "Sizing Optimization and Analysis of a Stand-alone WTG System Using Hybrid Energy Storage Technologies," ***PEA-AIT International Conference on Energy and Sustainable Development: Issues and Strategies*** *(ESD 2010)*, Chiang Mai, Thailand. 2-4 June 2010.

12. **P. Bajpai**, Prakshan N. P. and N.K. Kishore, "Renewable Hybrid Stand-alone Telecom Power System Modeling and Analysis in HOMER," ***IEEE, TENCON*** *2009*, Singapore

13. **P. Bajpai**, and S. N. Singh, "Impact of Transmission Constraints on Supply-Side Bidding Strategy Using BLP Approach," ***IEEE PES General Meeting***, USA, July 2008.

14. **P. Bajpai** and S. N. Singh, "An Electric Power Trading Model For Indian Electricity Market," ***IEEE PES General Meeting***, Canada, June 2006.

15. **P. Bajpai** and S. N. Singh, "Electricity Trading in Competitive Power Market: An Overview and Key Issues," ***Proc. of International Conference on Power Systems*** (ICPS), Nepal, vol. II, November 2004, pp. 571-576.

(b) National (in India)

1. Bonu Ramesh Naidu and **Prabodh Bajpai**, "Voltage Fault Ride-Through Operation of Solar PV Units: A Review and Way Forward" **8th International Conference on Power Systems 2019", (ICPS 2019)**, Jaipur, India, December 20 - 22, 2019.

2. M. V. Hadole, K.N. Tiwari, and **P. Bajpai**, "Predicting The Performance Of Solar PV Operated Trickle Irrigation System", **9th International Micro Irrigation Conference, (IMIC),** Aurangabad, Jan. 2019

3. B. Ramesh Naidu, Sherin Jose, Divyank Singh and **P. Bajpai**, "A Unified Distributed Control Strategy for DC Microgrid with Hybrid Energy Storage Devices" **20th National Power Systems Conference (NPSC),** NIT Tiruchirappalli, Dec. 2018

4. Priyanka Mishra, A. K. Pradhan and **P. Bajpai**, "Adaptive Relay Setting for Protection of Distribution System with Solar PV", **20th National Power Systems Conference (NPSC),** NIT Tiruchirappalli, Dec. 2018

5. Anees V. P., Ishita Biswas, Kishore Chatterjee, **P. Bajpai,** and D. Kastha, "Isolated Multiport Converter for Solar PV Systems and Energy Storage Systems for DC Microgrid" 15th ***IEEE India Conference*** (INDICON), IIT Madras, Dec. 2018.

6. M. V. Hadole, K.N. Tiwari, and **P. Bajpai**, "Investigation of Solar PV Powered Submersible Pump Performance for Managing Micro Irrigation System under Varying Climatic Conditions.", **Global Water Security Conference for Agriculture and Natural Resources,** Hyderabad, Oct. 2018

7. I. Biswas, **P. Bajpai,** and D. Kastha, "Isolated Multiport Converter for fuel Cell and Energy Storage systems for DC Microgrid," in 14th ***IEEE India Conference*** INDICON, IIT Roorkee 2017.

8. S. Sinha, **P. Bajpai**, and A.K. Sinha "Solar PV fed Standalone DC Microgrid with Hybrid Energy Storage System", 6th IEEE International Conference on ***Computer Application in Electrical Engineering- Recent Advance***s (CERA), IIT Roorkee, Oct. 2017.

9. T. Datta, **P. Bajpai**, and A.K. Sinha, "Assessment of Voltage Stability of an Unbalanced Distribution System with Type-3 Wind Generator", accepted for presentation in 6th International Conference On **Computer Applications in Electrical Engineering- Recent Advance**s (CERA), IIT Roorkee, Oct. 2017.

10. T. Datta, **P. Bajpai**, and A.K. Sinha, "Three-phase Steady State Model for Unbalanced Operation of Grid-connected Wind Generation Unit", 13th ***IEEE India Conference*** (INDICON), IISc. Banglore, 2016.

11. S. Jibhkate, I.Biswas, **P. Bajpai,** and D. Kastha, "Three Port DC-DC Converter for Storage Integration in Microgrids," 19th ***National Power Systems Conference*** (NPSC), IIT Bhubaneswar, Dec. 2016.

12. D. Pal, H. Koniki, **P. Bajpai**, "Central and Micro Inverters for Solar Photovoltaic Integration in AC grid," 19th ***National Power Systems Conference*** (NPSC), IIT Bhubaneswar, Dec. 2016.

13. P. Jana, S. Chattopadhyay, S. Maiti, **P. Bajpai** and C. Chakraborty, "Hybrid modulation technique for binary asymmetrical cascaded multilevel inverter for PV application," *2016*

IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), pp. 1-6, Trivandrum, India, Dec. 2016.

14. P. Jana, S. Chattopadhyay, **P. Bajpai** and C. Chakraborty, "Asymmetrical cascaded multilevel inverter with single DC source using high frequency resonant converter," *2016* ***IEEE Students' Technology Symposium (TechSym)***, pp. 73-78, IIT Kharagpur, Oct. 2016.

15. T. Datta, A.K. Sinha, and **P. Bajpai**, "Analysis of Modified ROCOF Relays for Islanding Detection of Distribution Systems with DFIG", International Conference on ***21st Century Energy Needs- Materials, Systems and Applications*** (ICTFCEN), IIT Kharagpur, Nov. 2016.

16. S. Sinha, A.K. Sinha , **P. Bajpai**, "Analysis of Hybrid Storage System in DC Microgrid", International Conference on ***21st Century Energy Needs- Materials, Systems and Applications*** (ICTFCEN), IIT Kharagpur, Nov. 2016.

17. D. Pal, **P. Bajpai**, "Active and Reactive Power Control in Three Phase Solar PV Inverter using Modified IC Method, "International Conference on ***21st Century Energy Needs – Materials, Systems and Applications*** (ICTFCEN), IIT Kharagpur, Nov. 2016.

18. Prabodh Bajpai, Ashok Kumar Garai, Vivek Kumar Bohra, "***Challenges in Microgrid Management", R&D for Energy Sustainability***, NTPC, NETRA's Conference, New Delhi, April 2016.

19. Ishita Biswas, and **Prabodh Bajpai**, "Control of PV-FC-Battery-SC Hybrid System standalone DC load", *18Th* ***National Power System Conference****, (NPSC),* IIT Guwhati, Dec. 2014.

20. Ashish R. Hota, and **Prabodh Bajpai**, "Price-based Indirect Control of Storage Devices in a Smart Grid", *17th* ***National Power System Conference****, (NPSC),* IIT BHU, Dec. 2012,

21. Ishita Biswas, and **Prabodh Bajpai**, "Optimal Sizing of PV-FC-Battery Hybrid System With Energy Based Approach and PSO", *17th* ***National Power System Conference****, (NPSC),* IIT BHU, Dec. 2012.

22. Ishita Biswas, Vaishalee Dash and **Prabodh Bajpai**, "Sizing Optimization of PV-FC-Battery System with Hybrid PSO-EO Algorithm", ***IEEE INDICON***, Kochi, Kerala, India, Dec. 2012

23. P.K. Nayak A. K. Pradhan and **P. Bajpai**, "Detecting Fault during Power Swing for a Series Compensated Line", ***IEEE ICEAS-2011***, Bubneshwar, India, Dec, 2011.

24. **P. Bajpai**, and Subhash Kumar, "Development and Performance Test of an Automatic Two-Axis Solar Tracker System", ***IEEE INDICON***, Hyderabad, India, Dec. 2011

25. P. K. Nayak, J. Ganeswara Rao, P. Kundu, A. K. Pradhan and **P. Bajpai**, "A Comparative Assessment of Power Swing Detection Techniques," *IEEE PEDES-2010,* New Delhi, India, Dec, 2010.

26. **Prabodh Bajpai**, Vaishalee Dash, N.K. Kishore, "Bi-annual Sun Tracking for Solar PV Module Support Structure: Study and Implementation" *16^{Tth}* ***National Power System Conference****, (NPSC),* Hyderabad, Dec. 2010, pp. 56-61.

27. **P. Bajpai** and A. K. Sinha, "Application of Internet to Power System Monitoring, Trading and Transmission Services", *Seminar on* ***IT in Power Sector Performance Upgradation Including Automation***, Council of Power Utilities, New Delhi, India, 2008

28. **P. Bajpai** and S. N. Singh, "Price Area Congestion Management Approach for Restructured Indian Power Market," *Proc. of* ***International Seminar on Power Transmission Research Interests and Challenges***, CPRI, Bangalore, December 2005.

29. **P. Bajpai**, "Power Exchange: Trading Mechanisms," *Proc. of* ***Workshop on Electricity Market in India and learnings from Developed Markets,*** New Delhi, March 2005.

30. **P. Bajpai** and S. N. Singh, "Bidding and Gaming in Competitive Power Market: An Overview and Key Issues," *Proc. of* ***Thirteenth National Power System Conference***, (NPSC) IIT Madras, vol. I, December 2004, pp. 338-34.

31. **P. Bajpai**, P. Sensarma and S. Yadav, The Instantaneous Reactive Power Approach for Harmonic Extraction- Pitfalls and Safeguards, ***National Power Electronics Conference***, (NPEC), IIT, Bombay, October 16-17, 2003.

- ## Book Chapter(s)

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