

Education : B.E.E (Jadavpur University, Kolkata), 1989.
M.E.E (Jadavpur University, Kolkata), 1991.
Ph.D (I.I.T Kanpur), 1998.

Academic Experience :

No.	From	To	Designation	Organisation	Responsibilities
1	August 2009	Till date	Professor	EED, IITR	Teaching and Research
2	December 2005	August 2009	Associate Professor	EED, IITR	Teaching and Research
3	June 2004	May 2005	Research Associate (On leave from IITR)	Imperial College, London, UK	Research
4	June 2001	December 2005	Assistant Professor	EED, IITR (formerly UOR)	Teaching & Research.
5	October 1998	June 2001	Lecturer	EED, IITR (formerly UOR)	Teaching & Research.

Area of Specialisation : Electric Power Systems

Research Interests :

- Distribution System Analysis and Automation
- Flexible AC Transmission Systems (FACTS)
- HVDC
- Digital Protection of Power Systems
- Power Quality and Power System Harmonics.
- Distributed generation.

Courses Taught :

Under Graduate

- Electrical Science (Ist year)
- Power System Engineering (Third Year)
- Power System Analysis and Control (Third Year)
- Digital Control (Fourth Year)

Post Graduate

- Computer Aided Power system Analysis
- HVDC Systems
- Digital Protection of Power System (this course has been developed by me)

- EHV AC and DC Transmission.
- FACTS devices
- Power System operation and Control

Ph.D Thesis Supervised/under supervision :

- Identification and elimination of harmonics in power system – **Awarded.**
- Service Restoration in Power Distribution System - **Awarded.**
- Power System Stability Enhancement with Fuzzy TCSC Controller - **Awarded.**
- STATCOM damping controller for Power System - **Awarded.**
- Reactive Power Compensation using STATCOM – **Awarded.**
- Investigations on the development of Newton power flow model of voltage source converter based FACTS controllers - **Awarded.**
- Power quality improvement using D-STATCOM – **Awarded.**
- Power flow solution in the presence of uncertain Wind turbine generation system – **Awarded**
- Protection of series compensated lines – **Awarded**
- Voltage control issues in distribution system – **Awarded**
- Protection coordination issues in distribution system – **Under Progress**
- Investigations in AC/DC microgrid – **Under Progress**
- Feeder reconfiguration issues in distribution system - **Under progress**
- Distribution system state estimation - Under progress

M. Tech Thesis Sutervised/Under supervision :

Completed --- 55, On-going --- 2

Sponsored Research Project :

As Principal Investigator

- Load Estimation in Electric Power Distribution System (Sponsored By Central Power Research Institute (CPRI), Bangalore, India, total grant-in-aid : Rs/- 11.50 Lacs ----- Completed.

As Co-investigator

- Digital Traction OHE Protection (CSIR, India, total grant-in-aid : Rs. 9.13 Lacs) ---- -- Completed.
- Automation, Restructuring & Power Quality – A case study on Indian Power Sector (MHRD, Govt. of India, total grant-in-aid : Rs. 6.00 Lacs) -- ---- Completed.
- Optimal placement of sectionalizing switches and distributed generation resources for improving service reliability in power distribution system (Sponsored By Central Power Research Institute (CPRI), Bangalore, India, total grant-in-aid : Rs/- 32.10 Lacs ----- completed.

- Development of a smart solar photo voltaic based power supply system suitable for both grid and islanded modes of operation (DST, India, total grant-in-aid : Rs. 50.0 Lacs) --- On-going

Consultancy Project:

- Preparation of resource material on Efficiency Improvement Measures in Distribution System (for A&B and C&D level) (Sponsored by Power Finance Corporation).

Invited Lectures

Given invited lectures on following topics in different forums:

- Impulse Testing of Transformers
- Power Quality
- FACTS
- Load frequency control
- Converter control in microgrid

Other academic activities

- Member of international editorial board of “Electric power Components and Systems (Taylor & Francis)” from September, 2006 to August 2009.
- Member of international editorial board of “IET (formerly IEE) Proceeding Part C, Generation, Transmission and Distribution” from July, 2008 to June 2015.
- Co-developed a NPTEL web course on “Computer Aided Power System Analysis” (uploaded in the NPTEL site).
(web-site: <http://nptel.iitm.ac.in/courses/108107028/>)
- Associate Editor, IET (formerly IEE) Proceeding Part C, Generation, Transmission and Distribution from June 2015 to till date.
- Editor, IEEE Transactions on Sustainable Energy from June 1, 2015 to till date.
- Editor of a book titled "Power Distribution Automation" published by IET (formerly IEE), 2016.

Administrative responsibility

- Chairman, DRC from July 2012 to June 2013
- Group Leader, PSE Group, EED, IITR from June 2015 to April 30, 2017
- Head of the department, from May 1, 2017 till date.

Awards and Honours

- Recipient of "Outstanding Teacher Award - 2016" by IIT Roorkee.

Publication in International Journals

1. Afroz Alam, M. Nabab Alam, Vinay Pant and **Biswarup Das**, “Placement of protective devices in distribution system considering uncertainties in loads, temporary and permanent failure rates and repair rates”, *IET, Generation, Transmission & Distribution*, (paper no. GTD-2017-0075.R1).
2. Akhilesh Mathur, Vinay Pant and **Biswarup Das**, “Fault analysis of unbalanced radial and meshed distribution system with inverter based Distributed Generation (IBDG)”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 85, February 2017, pp: 164 – 177.
3. Jyoti Shukla, **Biswarup Das** and Vinay Pant, “Consideration of small signal stability in multi-objective distribution system reconfiguration in the presence of distributed generation”, *IET, Generation, Transmission & Distribution*, Vol. 11, No. 1, January 2017, pp: 236-245.
4. Afroz Alam, Vinay Pant and **Biswarup Das**, “Switch and recloser placement in distribution system considering uncertainties in loads, failure rates and repair rates”, *Electric Power Systems Research (Elsevier)*, Vol.- 149, November 2016, pp: 619 – 630.
5. M. Nabab Alam, **Biswarup Das** and Vinay Pant, “An Interior Point Method Based Protection Coordination Scheme for Directional Overcurrent Relays in Meshed Networks”, *International Journal of Electrical Power & Energy Systems (Elsevier)* Vol.- 81, October 2016, pp: 153 – 164.
6. Bhargav Y. Vyas, **Biswarup Das** and R. P. Maheswari, “Improved Fault Classification in Series Compensated Transmission Line: Comparative Evaluation of Chebyshev Neural Network Training Algorithms”, *IEEE Transactions on Neural Networks and Learning Systems*, Vol.-27, No. - 8, August 2016, pp: 1631 - 1642.
7. Novalio Daratha, **Biswarup Das** and J. D. Sharma, “Robust Voltage Regulation in Unbalanced Radial Distribution System under Uncertainty of Distributed Generation and Loads”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 73, December 2015, pp: 516 – 527.
8. M. Nabab Alam, **Biswarup Das** and Vinay Pant, “A Comparative Study of Metaheuristic Optimization Approaches for Directional Overcurrent Relays Coordination”, *Electric Power Systems Research (Elsevier)*, Vol.- 128, November 2015, pp: 39 – 52.
9. Akhilesh Mathur, Vinay Pant and **Biswarup Das**, “Unsymmetrical short-circuit analysis for Distribution system considering loads”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 70, September 2015, pp: 27 – 38.
10. Bhargav Y. Vyas, R. P. Maheswari and **Biswarup Das**, “Investigation for Improved Artificial Intelligence Techniques for Thyristor Controlled Series Compensated Transmission Line Fault Classification with Discrete Wavelet Packet Entropy Measures”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.-42, No. - 6, 2014, pp: 554 - 566.
11. Bhargav Y. Vyas, **Biswarup Das** and R. P. Maheswari “An Improved Scheme for Identifying Fault Zone in A Series Compensated Transmission Line using Undecimated Wavelet Transform and

Chebyshev Neural Network”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 63, December 2014, pp: 760 – 768.

12. **Biswarup Das** “Uncertainty modeling of wind turbine generating system in power flow analysis of radial distribution network”, *Electric Power Systems Research (Elsevier)*, Vol.- 111, June 2014, pp: 141 – 147.
13. D. Sreenivasarao, Pramod Agarwal and **Biswarup Das**, “Performance Evaluation of Carrier Rotation Strategy in Level Shifted Pulsewidth Modulation Technique”, *IET Power Electronics*, Vol.-7, No. - 3, March 2014, pp: 667-680.
14. Novalio Daratha, **Biswarup Das** and J. D. Sharma, “Coordination between OLTC and SVC for Voltage Regulation in Unbalanced Distribution System with Distributed Generation”, *IEEE Transaction on Power Systems*, Vol.-29, No. - 1, January 2014, pp: 289-299.
15. Bhargav Y. Vyas, R. P. Maheswari and **Biswarup Das**, “Improved Fault Analysis Technique for Protection of Thyristor Controlled Series Compensated Transmission Line”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 55, February 2014, pp: 321 – 330.
16. Neeraj Gupta, Vinay Pant and **Biswarup Das**, “Probabilistic load fow incorporating generator reactive power limit violations with spline based reconstruction method”, *Electric Power Systems Research (Elsevier)*, Vol.- 106, January 2014, pp: 203 – 213.
17. D. Sreenivasarao, Pramod Agarwal and **Biswarup Das**, “Performance Enhancement of a Reduced Rating Hybrid D-STATCOM for Three-phase, Four-wire System”, *Electric Power Systems Research (Elsevier)*, Vol.- 97, April 2013, pp: 158 – 171.
18. D. Sreenivasarao, Pramod Agarwal and **Biswarup Das**, “A T-connected transformer based hybrid D-STATCOM for three-phase, four wire systems”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 44, No. 1, January 2013, pp: 964 – 970.
19. Vinay Pant, **Biswarup Das** and Annapurna Bhargava, “Periodic output feedback technique based design of STATCOM damping controller”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 43, No. 1, December 2012, pp: 344 – 350.
20. **Biswarup Das** “Estimation of parameters of a three phase distribution feeder”, *IEEE Transaction on Power Delivery*, Vol.-26, No. - 4, October 2011, pp: 2267-2276.
21. Suman Bhowmick, **Biswarup Das** and Narendra Kumar, “An Advanced Static Synchronous Compensator Model to Reuse Newton and Decoupled Power Flow Codes”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.- 39, No. 15, October 2011, pp: 1647 – 1666.
22. Salman Hamid, **Biswarup Das** and Vinay Pant, “Reduced rule base self tuning fuzzy PI controller for TCSC”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 32, No. 9, November 2010, pp: 1005 – 1013.

23. P. Banerjee, **Biswarup Das** and Pramod Agarwal, “Distribution grid voltage control using cascaded multilevel inverter based STATCOM”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.- 38, No. 12, September 2010, pp: 1389 – 1405.
24. Urmil B. Parikh, **Biswarup Das** and R. P. Maheswari, “Fault Classification Technique for Series Compensated Transmission Line using Support Vector Machine”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.- 32, No. 6, July 2010, pp: 629 – 636.
25. Jagdish Kumar, **Biswarup Das** and Pramod Agarwal, “Optimized Switching Scheme of a Cascade Multilevel Inverter”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.- 38, No. 10, April 2010, pp: 445 – 464.
26. Vinay Pant, **Biswarup Das** and Annapurna Bhargava, “STATCOM damping controller design using fast output sampling feedback technique”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.- 37, No. 12, December 2009, pp: 1348 – 1364.
27. **Biswarup Das**, “Incorporation of Uncertainties in Radial Distribution System Load Flow with Voltage Dependent Loads”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.- 37, No.-10, October 2009, pp: 1102-1117.
28. Suman Bhowmick, **Biswarup Das** and Narendra Kumar, “An Advanced IPFC Model to Reuse Newton Power Flow Codes”, *IEEE Transaction on Power System*, Vol.-24, No.-2, May 2009, pp: 525-532.
29. Emjee Puthooran and **Biswarup Das**, “Load Estimation in Balanced Radial Distribution System with Reduced Measurements”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.-37, No.-5, May 2009, pp: 547-559.
30. Suman Bhowmick, **Biswarup Das** and Narendra Kumar, “An Indirect UPFC Model to Enhance Reusability of Newton Power Flow Codes”, *IEEE Transaction on Power Delivery*, Vol.-23, No.-4, October 2008, pp: 2079-2088.
31. Urmil B. Parikh, **Biswarup Das** and R. P. Maheswari, “Combined Wavelet-SVM technique for fault zone detection in a series compensated transmission line”, *IEEE Transaction on Power Delivery*, Vol.-23, No.-4, October 2008, pp: 1789-1794.
32. Salman Hameed, **Biswarup Das** and Vinay Pant, “A Self Tuning Fuzzy PI Controller for TCSC to Improve Power System Stability”, *Electric Power Systems Research (Elsevier)*, Vol.-78, No.-10, August 2008, pp: 1726-1735.
33. Yogendra Kumar, **Biswarup Das** and Jaydev Sharma, “Multi-objective, multi-constraint service restoration of electric power distribution system with priority customers”, *IEEE Transaction on Power Delivery*, Vol.-23, No.-1, January 2008, pp: 261-270.
34. Suman Bhowmick, **Biswarup Das** and Narendra Kumar, “An Indirect Model of SSSC for Reducing Complexity of Coding in Newton Power Flow Algorithm”, *Electric Power Systems Research (Elsevier)*, Vol.-77, No.-10, August 2007, pp: 1432-1441.

35. **Biswarup Das**, “Consideration of Input Parameter Uncertainties in Load Flow Solution of Three Phase Unbalanced Radial Distribution System”, *IEEE Transaction on Power System*, Vol.-21, No.-3, pp: 1088-1095, August 2006.
36. **Biswarup Das** and B. C. Pal, “Voltage Control Performance of AWS Connected for Grid Operation”, *IEEE Transaction on Energy Conversion*, Vol.-21, No.-2, pp: 353-361, June 2006.
37. Yogendra Kumar, **Biswarup Das** and Jaydev Sharma, “Service Restoration in distribution system using non-dominated sorting genetic algorithm” *Electric Power Systems Research (Elsevier)*, Vol.-76, No.-6, June 2006, pp: 768 - 777.
38. Ashwani Kumar, **Biswarup Das** and Jaydev Sharma, “Robust Dynamic State Estimation of Power System Harmonics”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.-28, No.-1, January 2006, pp: 65-74.
39. **Biswarup Das**, “Fuzzy Logic Based Fault Type Identification in Unbalanced Radial Power Distribution System”, *IEEE Transaction on Power Delivery*, Vol.-21, No.-1, pp: 278-285, January 2006.
40. Ashwani Kumar, **Biswarup Das** and Jaydev Sharma, “Dynamic State estimation of power system Harmonics with Bad Data”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.-33, No.-12, pp: 1281-1295, December 2005.
41. Ashwani Kumar, **Biswarup Das** and Jaydev Sharma, “Genetic Algorithm Based Meter Placement for Static Estimation of Harmonic Sources”, *IEEE Transaction on Power Delivery*, Vol.-20, No.-2, pp: 1088-1096, April 2005.
42. **Biswarup Das**, “Rule Based Algorithm for Meter Placement and ANN Based Bus Voltage Estimation in Radial Power Distribution System”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.-33, No.-4, pp: 449-462, April 2005.
43. **Biswarup Das** and J. Vittal Reddy, “Fuzzy Logic Based Fault Classification Scheme for Digital Distance Protection”, *IEEE Transaction on Power Delivery*, Vol.-20, No.-2, pp: 609-616, April 2005.
44. Ashwani Kumar, **Biswarup Das** and Jaydev Sharma, “Simple Technique for Placement of Meters for Estimation of Harmonics in Electric Power System”, *IEE Proceedings, Part-C, Generation, Transmission & Distribution*, Vol.-152, No.-1, pp: 67-78, January 2005.
45. Ashwani Kumar, **Biswarup Das** and Jaydev Sharma, “Determination of Location of Multiple Harmonic Sources in a Power System”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.-26, No.-1, January 2004, pp: 73-78.
46. **Biswarup Das** & Shiv Prakash Velpula, “Optimal Capacitor Switching in a Distribution System using Functional Link Network”, *Electric Power Components and Systems (Taylor and Francis)*, Vol.-30, No.-8, August 2002, pp: 833-847.

47. **Biswarup Das**, “Radial Distribution System Power Flow Using Interval Arithmetic”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.-24, No.-10, July 2002, pp: 827-836.
48. **Biswarup Das** & Pradeep Kumar Varma, “Artificial Neural Network Based Optimal Capacitor Switching in a Distribution System”, *Electric Power Systems Research (Elsevier)*, Vol.-60, No.-2, December 2001, pp : 55 -- 62.
49. **Biswarup Das**, Arindam Ghosh & Sachchidanand, “Control of Dynamic Brake Through Heuristic Rule”, *Electric Machines and Power Systems (Taylor and Francis)*, Vol.-28, No.-11, pp : 1091-1105, November 2000.
50. N. K. Sharma, **Biswarup Das**, Arindam Ghosh & R. K. Varma, “Determination of Suitable Locations for Shunt Compensators in Multi-Machine Power Systems: A Systematic Approach”, *Electric Machines and Power Systems (Taylor and Francis)*, Vol.-28, No.-5, pp : 451-468, May 2000.
51. **Biswarup Das**, Arindam Ghosh & Sachchidanand, “Suitable Configuration of ASVC for Power Transmission Application”, *Electric Power System Research (Elsevier)*, Vol.-49, No.-2, pp : 107-122, March 1999.
52. **Biswarup Das**, Sachchidanand & Arindam Ghosh, “Generalized Bridge Converter Model for Electromagnetic Transient Analysis”, *IEE Proceedings, Part-C, Generation, Transmission & Distribution*, Vol.-145, No.-4, pp : 423-429, July 1998.
53. **Biswarup Das**, Arindam Ghosh & Sachchidanand, “A Novel Control Strategy for Braking Resistor”, *International Journal of Electrical Power & Energy Systems (Elsevier)*, Vol.-20, No.-6, pp : 391-403, 1998.

(Biswarup Das)