

# CURRICULUM VITAE

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**RESEARCH INTERESTS** : Breakdown voltage study of solid insulating materials, Power Quality detection and classification for islanding and non-islanding cases using signal processing and data mining techniques, Power system security assessment and enhancement using soft computing and data mining techniques, Power system planning using evolutionary techniques, Enhancement of Power System Stability using Flexible AC Transmission System (FACTS) Controller.

## Publications

### Journal Publications

[1]S. Mohanty and S. Ghosh , “ Modeling of breakdown voltage of White Minilex Paper in the presence of voids under ac and dc conditions using fuzzy logic techniques”, International Journal of Electric Power and Energy Systems (Elsevier), Volume 32, Issue 5, 2010, pp. 518-523.

[2]S. Mohanty and S. Ghosh, “ ANN modeling of breakdown voltage of solid insulating materials in the presence of void”, IET Proc. Science, Measurement & Technology, Volume 4, Issue 5 , 2010, pp. 278-288.

[3] S. Behera and S. Mohanty, “ Least square support vector machine modeling of breakdown voltage of solid insulating materials in the presence of voids”, Journal of Institution of Engineers (India): Series B, Volume 94, Issue 1, 2013, pp. 21-27.

[4] S Mohanty and S Ghosh , “ Breakdown voltage of solid insulations: it's modeling using soft computing techniques and it's microscopic study”, International Journal of

Electric Power and Energy Systems, DOI:- 10.1016/j.ijepes.2014.05.035, 62:825-835, November 2014.

[5] S. Upadhyaya, S. Mohanty and C.N. Bhende, “ Hybrid method for fast detection and characterization of power quality disturbances”, Journal of Control, Automation and Electrical Systems, Springer, DOI: - 10.1007/s40313-015-0204-4., Volume 26, Issue 5, 2015, pp. 556-566.

[6] P. Sekhar and S. Mohanty. An Online Power System Static Security Assessment Module Using Multi-Layer Perceptron and Radial Basis Function Network. *International Journal of Electrical power and Energy systems*, 76:165 -- 173, March 2016.

[7] P. Sekhar and S. Mohanty. Classification and assessment of power system static security using decision tree and random forest classifiers. *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, Published online, August 2015. (DOI: 10.1002/jnm.2096)

[8] P. Sekhar and S. Mohanty. An enhanced cuckoo search algorithm based contingency constrained economic load dispatch for security enhancement. *International Journal of Electrical power & Energy systems*, 75:303 -- 310, February 2016.

[9] P. Samal, Sanjib Ganguly and S. Mohanty. Planning of unbalanced radial distribution systems using differential evolution algorithm. *Energy systems* (Springer), DOI:- 10.1007/2Fs12667-16-0202-z: 1-22, March 2016.

[10] P. Samal, S. Mohanty and Sanjib Ganguly. Modeling and allocation of a DSTATCOM on the performance improvement of unbalanced radial distribution systems *Journal of electrical engineering*, Volume 16, No.2, September 2016, pp.323-332.

[11] S. Upadhyaya and S. Mohanty, “Localization and classification of power quality disturbances using maximum overlap discrete wavelet transform and data mining based classifiers”, ACODS 2016, IFAC- PapersOnline 49-1, pp. 437-442, Trichy, February, 2016.

### **Conference Publications**

[1] S. Ghosh and S. Mohanty, “Modeling of the breakdown voltage behaviour of Leatherite Paper in the presence of void using Artificial Neural Network ”, Digital Object

Identifier: 10.1109/ICSD.2007.4290761, *IEEE International Conference on Solid Dielectrics*, U.K., Winchester, July. 2007, pp. 94-97.

[2] S. Mohanty , S. Ghosh and S. K. Mohapatra, "Breakdown voltage modelling of Leatherite Paper using fuzzy logic technique ", *International Conference on Polymeric Materials in Power Engineering (ICPMPE)* , India, CPRI Bangalore, October 2007, pp 1-4.

[3] S. Mohanty and S. Ghosh, "Modeling of the breakdown voltage of Manila Paper in the presence of voids using adaptive fuzzy logic techniques", Digital Object Identifier: 10.1109/ICPWS.2009.5442738, *IEEE 3<sup>rd</sup> International Conference on Power Systems* , India, I.I.T. Kharagpur, Dec. 2009.

[4] S. Mohanty and S. Ghosh , " Modeling of breakdown voltage of solid insulating materials in the presence of voids under ac conditions using fuzzy logic techniques Digital Object Identifier: 10.1109/CEIDP.2011.6232711", *IEEE International Conference on Electrical Insulation and Dielectric Polarization*, Mexico, Oct. 2011, pp. 530-533.

[5] S. Mohanty , S. Ghosh and P. C. Panda , "Microscopic Study of the Breakdown Voltage of Solid Insulating Materials under DC and AC conditions", Digital Object Identifier: 10.1109/ICPADM.2012.6318974, 10<sup>th</sup> IEEE ICPADM, CPRI Bangalore, July 2012, pp.1-4.

[6] D. Choudhary and S. Mohanty, " Power quality events monitoring and characterization using wavelet based fuzzy expert system", 1<sup>st</sup> International Conference on Power Electronics Systems and Applications, NIT Rourkela March 2013, pp. 1-4.

[7] S. Upadhyaya and S. Mohanty, " Power Quality (PQ) disturbance detection using wavelet based signal processing", Proceedings of India Conference 2013 Annual (INDICON) , IEEE, DOI:- 10.1109/INDCON.2013.6725992, pp. 1-6.

[8] Sekhar P. and S. Mohanty, " Power system contingency ranking using Newton Raphson load flow method", Proceedings of India Conference 2013 Annual (INDICON) , IEEE, DOI:- 10.1109/INDCON.2013.6725912, pp. 1-4.

[9] S. Upadhyaya and S. Mohanty, "Power quality disturbance localization using maximum overlap discrete wavelet transform", Proceedings of India Conference 2015

Annual (INDICON) , IEEE, DOI:- 10.1109/INDCON.2015.7443574, New Delhi, December, pp. 1-6.

[10] P. Samal, S. Mohanty and S. Ganguly, "Effect of DSTATCOM Allocation on the Performance of an Unbalanced Radial Distribution Systems" , International Conference on Engineering and Technology, ICETECH 2016, Coimbatore, March, pp.927-931.

[11] P. Samal, S. Mohanty and Sanjib Ganguly Planning of Distributed Generation and Capacitor in an Unbalanced Radial Distribution System using Cuckoo Search Algorithm. (ICEMS Japan November, 2016, pp. 1-5 ).

### **Ph.D. Supervision**

SL No.	Name of the Student	Title of Thesis	Year Degree Awarded
1.	Sekhar P.	Power system security assessment and enhancement using data mining and soft computing techniques.	July 2016
2.	S. Upadhyaya	Fast Characterization of power quality events based on discrete signal processing and data mining techniques.	January 2017

### **Theory Courses taught at the Under Graduate Level**

[1] Basic Electrical Engineering –EE-100

[2] Electrical Machines –EE-307

[3] Power Generation Systems- EE-306

[4] Artificial Intelligence – EE-429

[5] Advanced Electrical Engineering –EE- 308

[6] Electrical Machine –I –EE-203

## **Theory Courses taught at the Post Graduate Level**

[1] Soft Computing Techniques–EE-637

[2] Power System Dynamics –EE-615

[3] Flexible AC Transmission Systems- EE-604

## **Management and Institutional Development**

[1] P.I.C. Electrical Construction from July 2012 to April 2015