# Dr. Srikanta Mohapatra

Dr. Srikanta Mohapatra
Associate Professor (I)

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## INTERESTED RESEARCH AREAS:

1. Computationally Intelligent methodology applied to Transient Stability of Electric Power System, 2. Load Frequency Control of Automatic Generation Control of Electric Power System, 3. New topologies of DC-DC converters for Solar Photo-voltaic applications, 4. New topologies Power Electronic Converters. 5. Nano-capacitors.

## SCHOOL LEVEL RESPONSIBILITY:

1. Presently, I am the coordinator of Power Electronic Subject of the undergraduate courses.
2. I am one of the coordinators for the ABET accreditation of School of Electrical Engineering.
3. I am a member of the School Level Research Committee (SLRC).

## ACADAMIC DETAILS :

| S.NO | DEGREE | INTITUTION NAME | YEAR OF PASSING |
|---|---|---|---|
| 1. | Ph. D. in Electrical Engineering | School of Electrical Engineering , KIIT University, Bhubaneswar | 2014 |
| 2. | M. Tech. in Electrical Engineering with Specialization in Power Electronics and Drives | Institute of Technical Education and Research, Sikhsa “O” Anusandhan University, Bhubaneswar, Odisha | 2009 |
| 3. | B. Tech. Degree in Electrical Engineering | College of Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar, Orissa | 1991 |

## EXPERIENCE:

| Organization of employment | Designation | Tenure |
|---|---|---|
| Odisha Engineering College, Bhubaneswar | Lecturer in the Department of Electrical Engineering | 3rd August 1992 to 4th April 1993. |
| Odisha Engineering College, Bhubaneswar | Lecturer in the Department of Electrical Engineering | 5th Aug 1994 to Feb 2001. |
| Institute of Technology, Bhubaneswar | Senior Lecturer in the Department of Electrical Engineering | 25th Jun 2001 to 2nd Jun 2002. |
| Institute of Technical Education and Research, Bhubaneswar | Lecturer in the Department of Electrical Engineering | 3rd June 2002 to 2nd Feb 2006. |
| Institute of Technical Education and Research, Bhubaneswar | Senior Lecturer in the Department of Electrical Engineering | 3rd Feb 2006 to 7th Aug 2009. |
| Institute of Technical Education and Research, Bhubaneswar | Asst. Professor in the Department of Electrical Engineering | 8th Aug 2009 to 24th Aug 2010. |
| KIIT University, Bhubaneswar | Asst. Professor (II) in the School of Electrical Engineering, Campus-3 | 25th Aug 2010 to 31st Aug 2015. |
| KIIT University, Bhubaneswar | Associate Professor (I) in the School of Electrical Engineering, Campus-3 | 1st Sep 2015 onwards till date. |

## PUBLICATION:

SELECTED PUBLICATIONS(SI INDEX) :

1. Siddhartha Panda, Sarat Chandra Swain, Srikanta Mohapatra, "Design and Analysis of Bacteria Foraging Optimized TCSC based controller for Power System Stability Improvement", International Journal of Data Analysis Techniques and Strategies (IJDATS), **INDERSCIENCE** Publishers, Geneva, Switzerland. Doi: 10.1504/IJDATS.2014.066602., Volume: 6, Issue: 4, Dec-2014, Pages: 384-406, **SCOPUS INDEXED.**
2. Srikanta Mohapatra, Siddhartha Panda, Sarat Chandra Swain, "A hybrid Firefly algorithm and Pattern Search Technique for SSSC Based Power Oscillation Damping Controller Design", Ain Shams Engineering Journal, ELSEVIER, doi: 10. 1016/j.asej.2014.07.002., Volume 5, Issue 4, December 2014, Pages 1177–1188, **ISSN No.: 2090-4479, SNIP-0.912, SJR-0.362**, **SCOPUS INDEXED and SCI Indexed.**
3. Siddhartha Panda, Sarat Chandra Swain, Srikanta Mohapatra, "A Hybrid BFOA-MOL approach for FACTS-based damping controller Design using Modified Local Input Signal", International Journal of Electric Power and Energy Systems, ELSEVIER, doi:

10.1016/j.ijepes.2014.11.026, Volume : 67, Pages: 238-251, May-2015, **ISSN No.: 0142-0615, SNIP: 2.193, SJR: 1.574**, **SCOPUS INDEXED and SCI Indexed, (IMPACT FACTOR- 3.43).**

4. S. Panda, Srikanta Mohapatra, S. C. Swain, "Modelling, Simulation and Optimal Tuning of FACTS Controller in a multi-machine Power System", International Journal of Applied Systemic Studies, **INDERSCIENCE** Publications, UK, Volume: 6, No. :1, Pages : 42-57, 2015. **ISSN (Print): 1751-0579, ISSN (online): 1751-0597, SCOPUS INDEXED.**

FULL PUBLICATION:

5. Siddhartha Panda, Sarat Chandra Swain, Srikanta Mohapatra, "Design and Analysis of Bacteria Foraging Optimized TCSC based controller for Power System Stability Improvement", International Journal of Data Analysis Techniques and Strategies (IJDATS), **INDERSCIENCE** Publishers, Geneva, Switzerland. Doi: 10.1504/IJDATS.2014.066602., Volume: 6, Issue: 4, Dec-2014, Pages: 384-406, **SCOPUS INDEXED.**
6. Srikanta Mohapatra, Siddhartha Panda, Sarat Chandra Swain, "A hybrid Firefly algorithm and Pattern Search Technique for SSSC Based Power Oscillation Damping Controller Design", Ain Shams Engineering Journal, ELSEVIER, doi: 10. 1016/j.asej.2014.07.002., Volume 5, Issue 4, December 2014, Pages 1177–1188, **ISSN No.: 2090-4479, SNIP-0.912, SJR-0.362**, **SCOPUS INDEXED and SCI Indexed.**
7. Siddhartha Panda, Sarat Chandra Swain, Srikanta Mohapatra, "A Hybrid BFOA-MOL approach for FACTS-based damping controller Design using Modified Local Input Signal", International Journal of Electric Power and Energy Systems, ELSEVIER, doi: 10.1016/j.ijepes.2014.11.026, Volume : 67, Pages: 238-251, May-2015, **ISSN No.: 0142-0615, SNIP: 2.193, SJR: 1.574**, **SCOPUS INDEXED and SCI Indexed, (IMPACT FACTOR- 3.43).**
8. S. Panda, Srikanta Mohapatra, S. C. Swain, "Modelling, Simulation and Optimal Tuning of FACTS Controller in a multi-machine Power System", International Journal of Applied Systemic Studies, **INDERSCIENCE** Publications, UK, Volume: 6, No. :1, Pages : 42-57, 2015. **ISSN (Print): 1751-0579, ISSN (online): 1751-0597, SCOPUS INDEXED.**
9. S. C. Swain, Srikanta Mohapatra, Siddhartha Panda and Susmita Panda, "Design of DE Optimized SSSC-based FACTS controller", International Journal of Electronics and Electrical Engineering, INTERSCIENCE Vol. 2, Issue: 4, pp. 12-27, March-2012.
10. S. C. Swain, A. K. Baliarsingh, S. Mohapatra and S. Panda, "Design of Static Synchronous Series Compensator Based Damping Controller Employing Real Coded Genetic Algorithm", International Journal of Electrical, Computer, Electronics and Communication Engineering,

World Academy of Science Engineering and Technology, **International Science Indexed**, Vol. 5, Issue: 3, pp. 22-30, 2011.waset.org/publication/1136.

11. S. C. Swain, S. Mohapatra, S. Panda and S. R. Nayak, "Real Coded Genetic Algorithm for Robust Design of UPFC Supplementary Damping Controller", Special Issue of International Journal of Power System Operation and Energy Management, INTERSCIENCE publications, Vol. 1, Issue: 3, pp. 53-58, 2013.
12. Partha Sarathi Majhi, S. Dikshit and S. Mohapatra, "Modeling and Simulation of Photovoltaic Module using Incremental Conductance Algorithm", International Journal of Electrical and Management Research, Vol. 4, Issue: 2, pages: 205-211, April-2014, ISSN No.: 2250-0758.
13. Siddhartha Panda, Srikanta Mohapatra, Sarat Chandra Swain, "A Multi-Criteria Optimization Technique for SSSC Based Power Oscillation Damping Controller Design"- Volume: 7, Issue: 2, Pages: 553-565, June-2016, Ain Shams Engineering Journal, **ELSEVIER, ISSN No.: 2090-4479, SNIP-0.912, SJR-0.362, SCI Indexed and SCOPUS Indexed**.
14. S. Panda, A. K. Baliarsingh, S. Mohapatra, S. C. Swain, "Supplementary Damping Controller Design for SSSC to mitigate sub-synchronous resonance", International Journal of Mechanical Systems and Signal Processing, **ELSEVIER**, http://dx.doi.org/10.1016/j.ymssp.2015.07.013. Vol: 68-69, pages: 523-535, February-2016. **ISSN no. 0888-3270, SNIP-3.193, SJR-1.939, Impact Factor-2.256, 5-year impact factor-2.870, SCI Indexed and SCOPUS INDEXED**.

**Paper Accepted for Publication in conference:**

1. Priyanka Priyadarsini, Tapas Roy, Pradip Kumar Snadhu and Srikanta Mohapatra, "Analysis and Simulation Study of Extended Boost Z-Source Sparse Matrix Converter", IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems-2016 (ICPEICES-2016), Delhi Technical University, India.
2. Tapas Roy, Neha Aarzoo, Pradeep Kumar Sandhu, Chitralekha Jena, Srikanta Mohapatra, "A Novel Symmetrical Switched Capacitor Based Three Phase Cascaded Multilevel Inverter", IEEE International conference on Power Electronics, Drives and Energy Systems, 14$^{th}$-17$^{th}$ December 2016, Trivandrum, India.

## M.Tech THESIS GUIDED:

| YEAR : | |
|---|---|
| S.NO | TITLE |
| 1. | A New Interleaved DC-DC converter with High Voltage Gain and Reduced Switching Stress Voltage-By Ms. Saswati Sangita-Roll no.-1458026, Year-2016 |
| 2. | Simulation of Buck Converter for Charging a Battery from a Solar Photo-voltaic System with MPPT-By Mr. Avidip Mukhopadhyay-Roll no.-1116008,Year-2016 |
| 3. | Harnessing Optimal Electric Energy from PV arrays using Power Electronic Converters-By Mr. Salil Kumar Nayak,-Roll no.-1016019, Year-2015 |
| 4.. | Design and Implementation of DC-DC converter Based PV Energy System for Battery Charging Applications-By-Partha Sarathi Maji-Roll no.-1252016, Year-2014. |
| 5. | Design of SSSC Based Damping Controller Using AI Technique-Roll no.-1052022, Year-2012 |

## B.Tech PROJECTS GUIDED:

| YEAR : | |
|---|---|
| S.NO | TITLE |
| 1. | Solar Tracking System, year-2016 |
| 2. | Harmonic Reduction in Inverters, Year-2016 |
| 3. | Automatic Speed Limiter, Year-2016 |
| 4. | Automatic Street Light Control, Year-2015 |
| 5. | Harmonic Reduction, Year-2013 |

## CONFERENCE/WORKSHOPS ORGANIZED/ATTANDED:

| Serial No. | Title | Attended/ organized | YEAR |
|---|---|---|---|
| 1. | AICTE sponsored National Level Seminar on "Power Quality – Benefits and Constraints (PQBC-2006)" held on 18$^{th}$ Nov 2006 at the NM Institute of Engineering and Technology, Bhubaneswar, Orissa. | Attended | 2006 |
| 2. | All India Seminar on "Renewable Energy –Better Future to the Next Generation" under the aegis of Electrical Engineering Division, The Institution of Engineers (India), organized by Odisha state centre in collaboration with KIIT University from 12$^{th}$ to 13$^{th}$ March, 2011 at Bhubaneswar. | Attended | 2011 |
| 3. | Organized a Regional Seminar on "Energy Theft and Its Prevention" on 25$^{th}$ Jan 2003 in the Department of Electrical | Organized | 2003 |

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|---|---|---|---|
| | Engineering at Institute of Technical Education and Research, Jagamohan Nagar, Bhubaneswar. I was the organizing secretary and I presented a paper in the seminar. | | |
| 4. | Functioned as a coordinator in the INAE Distinguished Lecture Program and National Workshop on "Engineering Applications of Soft Computing and Machine Intelligence (NWSCMI-2007)" held during 17th to 19th December, 2007 at the Institute of Technical Education and Research, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India. | Organized | 2007 |
| 5. | Attended a two day workshop on "Bio-Inspired Techniques: Theory & Applications" on 5th and 6th December, 2014 at the School of Electronics Engineering, KIIT University at Bhubaneswar. | Attended | 2014 |
| 6. | Attended a two day National Workshop on "Energy Efficiency in Commercial Buildings as a Demand side Management Initiative" organized by the School of Electrical Engineering, KIIT University in collaboration with Department of Energy, EIC (Electricity) & SDA, Govt. of Odisha on 12th and 13th December, 2014. | Attended | 2014 |
| 7. | Successfully completed specialized training on "Frontier of Lighting and Human Factors" organized by Indian Society of Lighting Engineers, Calcutta State Centre, Kolkata & Local Centre, Bhubaneswar and School of Electrical Engineering, KIIT University, Bhubaneswar from 21st October to 4th November, 2013. | Attended | 2013 |

## SUBJECTS TAUGHT:

| S.NO | SUBJECT CODE | SUBJECT NAME |
|---|---|---|
| 1. | EE-3005 | Power Electronics |
| 2. | EE-1003 | Basic Electrical Engineering |
| 3. | EE-2003 | Network Analysis |
| 4. | EE-2010 | AC Machines |
| 5. | EE-2016 | Electrical Measurements and Measuring Instruments |