

## Dr. SARAT CH. SWAIN

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ASSOCIATE PROFESSOR -II



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### INTERESTED RESEARCH AREAS:

- Application of AI techniques to power system Problem
- Power system stability improvement
- Optimization technique
- Soft computing
- FACTS Device
- Photovoltaic Grid Interconnected System

### SCHOOL LEVEL RESPONSIBILITY:

Programme Head M.Tech  
Member of SLRC  
Member of BoS  
Member of SDC  
Faculty in charge Student Affairs  
Faculty in charge m/c Lab.  
Co-ordinator for NAAC & UGC Visit  
FIC Tutor-Mentor (SAP)  
Superintendent of Hostel

### ACADAMIC DETAILS :

S.NO	DEGREE	INSTITUTION NAME	YEAR OF PASSING
1.	<b>Ph.D.</b> (Electrical Engineering)	KIIT-University Bhubaneswar	<b>2010</b>
2.	<b>M.E</b> (Power system Engineering)	U.C.E Burla (VSSUT Burla)	<b>2001</b>
3.	<b>A.M.I.E(I)</b> (Electrical	Institution of Engineers India	<b>1994</b>

	Engineering)		
4.	<b>Diploma</b> (Elect.Engg. )	SCTEVT (U.C.P.Engineering school Berhampur)	<b>1988</b>
5.	<b>H.S.C</b>	B.S.E.O( A.N.Academey, Nachhipur)	<b>1982</b>

#### EXPERIENCE:

1 INDUSTRIAL: 2 Years

2 TEACHING: 20 Years

#### RESEARCH PROJECTS:

##### Applied:

S.NO	TITLE	DURATION	AMOUNT SANCTIONED
1.	DEVELOPMENT OF ENERGY SYSTEM MODEL AND SCENARIOES FOR INDIA	3 YEARS	-
2.	ENERGY AND EMISSION CORRIDOR OF ODISHA	3YEARS	-
3.	NOVELTY OF ABS SYSTEM IN PROPOSED CONTROLLER	2 YEARS	-
4.	STUDY AND ANALYSIS OF GRID INTERCONNECTED SOLAR PHOTOVOLTAIC ISSUES AND THEIR MITIGATION TECHNIQUES	3YEARS	-
5.	DIGITAL CONTROLLER FOR SOLAR PHOTOVOLTAIC CONVERTER	1YEARS	-

#### PUBLICATION:

Sl.No.	Research Papers in International Journals	Year of Publication
1.	"Real-Coded Genetic Algorithm for Robust Coordinated Design of Excitation and SSSC Based Controller" <i>Journal of Electrical Engineering</i> , Vol. 8 Issue 4, pp. 31 – 38, 2008.	2008
2.	"Design and analysis of SSSC-based supplementary damping controller" <i>International Journal of Simulation Modelling Practice and Theory</i> , <b>ELSEVIER</b> , Vol. 18, Issue 9, pp.1199 – 1213, 2010. <b>SCI &amp; Scopus Indexed.</b>	2010

3.	“Application of Computational Intelligence Technique for Economic Load Dispatch” <i>International Journal of Electrical, Robotics, Electronics and Communication Engineering</i> , , Vol.4,No.3, pp.17 – 25, 2010. <b>WASET. Scopus &amp; IS Indexed.</b>	2010
4.	“Differential evolution algorithm for simultaneous tuning of excitation and FACTS-based Controller” <i>International Journal of BICO</i> , Vol.2 No.6, PP. 404 - 412, 2010. <b>INDERSCIENCE Publications.UK, SCI &amp; Scopus Indexed.</b>	2010
5.	“Optimal Supplementary Damping Controller Design for TCSC Employing RCGA” <i>International Journals of Electrical, Robotics, Electronics and Communication Engineering, Computational Intelligence</i> , Vol. 5, No.11, pp. 85 – 94, 2011. <b>WASET, IS Indexed.</b>	2011
6.	“Robust FACTS Controller Design Employing Modern Heuristic Optimization Technique” <i>International Journal of Electrical, Robotics, Electronics and Communication Engineering</i> Vol. 5, No.8, pp.41 –50, 2011, <b>WASET. Scopus &amp; IS Indexed.</b>	2011
7.	“SSSC-based damping controller Employing Real Coded Genetic Algorithm” <i>International Journal of Electrical, Robotics, Electronics and Communication Engineering</i> , Vol.5, No. 3, pp.180 – 188, 2011. <b>WASET, Scopus Indexed.</b>	2011
8.	“Multi-Objective Optimization with Fuzzy Based Ranking for TCSC Supplementary Controller to Improve Rotor Angle and Voltage Stability” <i>International Journal of Electrical, Robotics, Electronics and Communication Engineering</i> , Vol. 6, No. 3, pp. 19 – 26, 2012. <b>WASET, IS Indexed.</b>	2012
9.	“Real coded Genetic Algorithm for Robust Design of UPFC Supplementary Damping controller” <i>International Journal of Power system operation and Energy Management</i> , Vol. 1, Issue-3,pp. 53-58, 2012.	2012
10.	“Design of DE Optimized SSSC-based FACTS controller” <i>International Journal of Electronics and Electrical Engineering</i> , Vol. 2, Issue 4, pp.12 – 27, 2012.	2012
11.	“SSSC-based controller design employing a multi-objective optimization technique” <i>International Journal of Modelling Identification and Control (IJMIC)</i> , Vol-18, No.3, pp 284-93, 2013. <b>INDERSCIENCE Publication, UK, Scopus Indexed</b>	2013
12.	“Damping of power system oscillations using SSSC-based Supplementary controller” <i>International Journal of Electronics communications and Electrical Engineering</i> Vol.3, Issue1, pp 25-35, 2013.	2013
13.	“Design and analysis of bacteria foraging optimized TCSC based controller for Power System Stability improvement” <i>International Journal of Data Analysis Techniques and Strategies</i> , Vol.6, No.4, pp384-406, 2014. <b>INDERSCIENCE Publication, UK, Scopus Indexed.</b>	2014
14.	“FF Algorithm for design of SSSC based FACTS controller” <i>International Journal of Electronic Communications and Electrical Engineering</i> Vol. 4, Issue2, pp 41-54, 2014.	2014
15.	“A hybrid firefly algorithm and pattern search technique for SSSC based power oscillation damping Controller design” in <i>Ain Shams Engineering Journal</i> , (2014), 5.pp1177- 1188 <b>ELSEVIER, Scopus Indexed</b>	2014
16.	“Optimized Operation of Inter-phase Transformer for power converters Operating in Parallel and its Analytical Characterization” <i>International Journal of Engineering Research &amp; Technology</i> , (IJERT) Vol.3 Issue 12, 2014.	2014

17.	"Modelling, Simulation and Optimal Tuning of FACTS Controller in a multi machine Power System" <i>International Journal of Applied Systemic Studies (IJASS)</i> , Vol. 6, No. 1, (2015) PP, 42-56, INDERSCIENCE Publication, UK. <b>Scopus Indexed</b>	2015
18.	"A Hybrid BFOA-MOL approach for FACTS-based damping controller design using modified Local input signal" <i>International Journal of Electric Power and Energy system (2015)</i> , 67, Pp238-251 <b>ELSEVIER, SCI &amp; Scopus Indexed</b>	2015
19.	"Supplementary damping controller design for SSSC to mitigate sub-synchronous resonance" <i>International Journal of 'Mechanical Systems and Signal Processing'</i> 68-69, pp 523-535, 2016 <b>ELSEVIER, SCI &amp; Scopus Indexed</b>	2016
20.	"A Multi-Criteria Optimization Technique for SSSC Based Power Oscillation Damping Controller Design" <i>Ain Shams Engineering Journal (2016)</i> , <b>ELSEVIER, Scopus Indexed</b>	2016
21.	"Analysis, Modelling and Implementation of Hybrid Wind-Solar-Battery Standalone System" <i>International Journal of Applied Engineering Research</i> , ISSN 0973-4562 Vol. 10 No.44 (2015) Pp30763-30767, <b>Scopus Indexed</b>	2015
22.	"Coordinated Design of PSS and Sliding Mode Based TCSC Controller for Enhancing Dynamic Stability of Power System" <i>Australian Journal of Basic and Applied Sciences</i> , 9(16) Special 2015, ISSN:1991-8178, Pages: 289-293, <b>Scopus Indexed</b>	2015
23.	"Tuning of Power Oscillation Damping Controllers using Firefly Algorithm A Comparison Study" <i>Australian Journal of Basic and Applied Sciences</i> , 9(16) Special 2015, ISSN:1991-8178, Pages: 306-311, <b>Scopus Indexed</b>	2015
24.	"Design of Hybrid Damping Controller for a Two Area System" <i>International Journal of control Theory and Application (IJCTA)</i> 9(17), pp 8765-8771 2016, International Science press. <b>Scopus Indexed</b>	2016
25.	"Effective Power Quality Improvement Using Dynamic Active Compensation System with Renewable Grid Interfaced Sources" <i>Ain Shams Engineering Journal (2016)</i> Ref No.: ASEJ-D-16-00671, <b>Under Review, ELSEVIER, Scopus Indexed.</b>	-
26.	"A DWT Based differential relaying STATCOM Integrated Wind fed Transmission Line" <i>Alexandria Engg Journal</i> , <b>Under Review, ELSEVIER, Scopus Indexed.</b>	-
27.	"A Fault Detection and Classification in Transmission Line including UPFC applying DWT and DFT" <i>International Journal of Power and Component</i> , <b>Under Review, Taylor Francis, Scopus Indexed.</b>	-

Sl.No.	Research Papers in IEEE Xplore, Indexed in Scopus	Year of Publication
1.	"Performance Evaluation of Photovoltaic System based on Solar Cell Modelling" <b>IEEE Xplore</b> , International conference (ICCPCT) 2015, 19-20 <sup>th</sup> march 2015 at Kumaracoil, Thucklay Kanyakumari district, Tamilnadu. Pages: 1 - 6, DOI: <a href="https://doi.org/10.1109/ICCPCT.2015.7159450">10.1109/ICCPCT.2015.7159450</a>	2015
2.	"Battery Storage Photovoltaic grid interconnected System part –IV" in <b>SPRINGER</b> conference (ICSCS) 2015, 22-23rd April 2015 at Kumaracoil, Thucklay Kanyakumari district, Tamilnadu	2015

3.	“Performance Evaluation of a grid connected Photovoltaic System based on Solar Cell Modelling part –III” <b>IEEE</b> conference (ICSTM)2015, at (VEL TECH RANGARAJAN DR.SAGUNTHALA R&D INSTITUTE OF SCIENCE & TECHNOLOGY), Chennai on 06-08 <sup>th</sup> May 2015	2015
4.	“Performance Analysis of a SSSC-Based Damping Controller” in Michael Faraday <b>IET</b> International Summit, International Conference, Focused Area, Power-Control-Automation, September 12 - 13, (MFIIS) 2015 in Kolkata, India. <b>IET Conference Publication. IEEE Xplore</b> Pages: 256 - 260, DOI: <a href="https://doi.org/10.1049/cp.2015.1640">10.1049/cp.2015.1640</a>	2015
5.	“Dynamic Stability Performance Improvement of SMIB Power System uses TCSC and SVC” <b>IEEE Xplore</b> , International conference (PCICT) 2015, at SOA University, Bhubaneswar, Odisha, India on 12-13 Oct. 2015. Pages: 517 - 521, DOI: <a href="https://doi.org/10.1109/PCITC.2015.7438219">10.1109/PCITC.2015.7438219</a>	2015
6.	“Fuzzy based Optimal Load Management in Standalone Hybrid Solar PV/Wind/Fuel Cell Generation System” <b>IEEE Xplore</b> , International conference (CCIS)2015, at K.L.University, Delhi on 7-8 Nov. 2015. Pages: 486 - 490, DOI: <a href="https://doi.org/10.1109/CCInteIS.2015.7437965">10.1109/CCInteIS.2015.7437965</a>	2015
7.	“A HARMONY SEARCH- FIREFLY ALGORIYHM BASED CONTROLLER FOR DAMPING POWER OSCILLATIONS” <b>IEEE Xplore</b> , International conference (CICT)2016, at ABES Engineering College, Ghaziabad during Feb. 12-13, 2016. Pages: 351 - 355, DOI: <a href="https://doi.org/10.1109/CICT.2016.75">10.1109/CICT.2016.75</a>	2016
8.	“A Comparative Study on Different Types of PV Modules and Their Optimization for Increasing the Efficiency” <b>IEEE Xplore</b> , International conference (CICT) 20126, at ABES Engineering College, Ghaziabad during February 12-13, 2016. Pages: 406 - 409, DOI: <a href="https://doi.org/10.1109/CICT.2016.86">10.1109/CICT.2016.86</a>	2016
9.	“Performance prediction of a grid interfaced PV system through MATLAB modelling- PART-II” <b>IEEE Xplore</b> , International conference (PESTSE)2016, at Amrita School of Engineering, Bengaluru, on 21-23 Jan. 2016. Pages: 1 - 6, DOI: <a href="https://doi.org/10.1109/PESTSE.2016.7516369">10.1109/PESTSE.2016.7516369</a>	2016
10.	Optimal Design And Feasibility Study of Renewable Hybrid Energy Systems <b>IEEE Xplore</b> , International conference (ICETETS) 2016, at Amrita School of Engineering, Bengaluru ,on 21-23 Jan. 2016. Pages: 1 - 6, DOI: <a href="https://doi.org/10.1109/ICETETS.2016.7603083">10.1109/ICETETS.2016.7603083</a>	2016
11.	“A review on different types of PV testing and their optimization” <b>IEEE Xplore</b> , International conference (ICCPCT) 2016, 19-20 <sup>th</sup> march 2016 at Kumaracoil, Thucklay Kanyakumari district,Tamilnadu. Pages: 1 - 5, DOI: <a href="https://doi.org/10.1109/ICCPCT.2016.7530330">10.1109/ICCPCT.2016.7530330</a>	2016
12.	“Control of active and reactive power of a three phase grid connected PV system” <b>IEEE Xplore</b> , International conference (ICCPCT) 2016, 19-20 <sup>th</sup> march 2016 at Kumaracoil, Thucklay Kanyakumari district,Tamilnadu. Pages: 1 - 6, DOI: <a href="https://doi.org/10.1109/ICCPCT.2016.7530227">10.1109/ICCPCT.2016.7530227</a>	2016
13.	“A Study on the increasing in the performance of a solar PV cell during shading condition <b>IEEE Xplore</b> , International conference (ICCPCT) 2016, 19-20 <sup>th</sup> march 2016 at Kumaracoil, Thucklay Kanyakumari district,Tamilnadu.Pages: 1 - 4, DOI: <a href="https://doi.org/10.1109/ICCPCT.2016.7530143">10.1109/ICCPCT.2016.7530143</a>	2016
14.	“Adaline LMS Control Scheme in a PEM Fuel Cell aided DSTATCOM for Power Quality Improvement” <b>IEEE Xplore</b> , DOI978-1-4673-8587-9/16/\$31.00©2016IEEE. (Accepted)	2016
15.	“An integrative approach to Renewable Grid Connected System with variable curve fitting Hysteresis controller” in <b>IEEE Xplore</b> , ICCACCA2016. (Accepted)	2016
16.	“Power System Oscillation Damping with Adaptive Unified Power Flow Controller” in <b>IEEE Xplore</b> , ICCACCA2016. (Accepted)	2016

17.	"Analysis of Voltage And loss Profile using Various FACTS devices" <b>IEEE Xplore</b> , Scopes 2016. (Accepted)	2016
18.	"Performance Analysis of a Renewable Grid Interconnected System Based on Fuzzy Logic" <b>IEEE Xplore</b> , Scopes 2016. (Accepted)	2016
19.	"A STATCOM Compensated Differential Relay Based Double Circuit Transmission Line" PNFE 2016, <b>Elsevier Energy Procedia</b> . (Accepted)	2016
20.	"A Discrete Wavelet Transform Based STATCOM Compensated Transmission Line". PNFE2016, <b>Elsevier Energy Procedia</b> (Accepted)	2016
21.	"A Differential relay based UPFC Compensated Line" <b>IEEE Xplore</b> scopes2016 (Accepted)	2016

Sl.No.	<b>Research Papers in National and International Conferences</b>	Year of Publication
1.	"Application of Particle swarm optimization technique for design of FACTS controller" International Conference on (PSACO-2008) Technically co-sponsored by IEEE Hyderabad section supported by UGC Andhra University 13th–15th March 2008 organized by Department of Electrical Engineering.	2008
2.	"Power System Stability Improvement by Differential Evolution Optimized TCSC-Based Controller" 17th International conference on computing (RCIC 2008 paper 17 poster) December 3rd to 5th 2008 at Mexico City Mexico.	2008
3.	"National Conference on Impact of Wind Speed Changes on Generation and Consumption of Active and Reactive Power" 22nd Dec. 2008 at PEC (D.U) Punjab.	2008
4.	"Impact of wind speed changes on generator" in the National seminar on Impact Assessment of Alternate Energy Sources organized by Rajadhani Engineering College, BBSR 30th January to 1st February 2008.	2008
5.	"All India seminar on Challenges of Power Sector in 21st century "organized by the Electrical Engineering Division Orissa State Centre, the Institution of Engineers in collaboration with KIIT University during 15th -16th March' 2008 and contributed article entitled "Coordinated Design of Multi Power System Stabilizers using Particle Swarm Optimization Technique"	2008
6.	" Investigation Impact of wind Speed on active and reactive power generation to distribution Network" All India seminar on ADVANCES IN RENEWABLE ENERGY TECHNOLOGY, organized by the Electrical Engineering Division Orissa State Centre, The Institution of Engineers in collaboration with KIIT University during 30th September 2008.	2008
7.	"Speed Control of DC Motor Drives" (CTSPS March 2007), National seminar on current trends and application for Soft Computing, In Power System at NMIT Bhubaneswar on 17th March 2007.	2007
8.	"Preventive Measures on Energy Pelferation and Conversation" All India seminar on Portfolio Based Electricity Generation & Planning the Role of Renewable in Enhancing Energy Diversity and Security, Bhubaneswar 11th August 2007, organized by Institute of Engineers India, Orissa State Centre in collaboration with KIIT University.	2007
9.	"Utilization of Power System with Reduction of Reactive Power in medium Industry" All India seminar on Portfolio Based Electricity Generation & Planning. The Role of Renewable in Enhancing Energy Diversity and Security, Bhubaneswar 11th August 2007, organized by Institute of Engineers India Orissa State Centre in collaboration with KIIT University.	2007
10.	"Simultaneous Tuning of Excitation and SSSC based Controller employing RCGA" AICT sponsored National Seminar of Soft Computing Engineering Applications during 5th -7th December' 2008 at department of Electrical	2008

	engineering KEC, BBSR.	
11.	“Control of Variable-speed Wind Turbine” National Conference on Future Perspective of Renewable Energy Sources in collaboration with NABARD, 12th December, 2009 Organized by School of Electrical Engineering KIIT University.	2009
12.	“Adaptive Control of Wind Turbine” National Conference on Future Perspective of Renewable Energy Sources in collaboration with NABARD, 12th December, 2009 Organized by School of Electrical Engineering KIIT University.	2009
13.	“Voltage Stability Analysis In a Multi machine Multi bus System Using TCSC” NSC-2016, Accepted.	2016

#### Ph.D GUIDED:

YEAR : Ph.D AWARDED in Year 2014 & 2016	
S.NO	TITLE
1.	Bio – Inspired Computing for TCSC and SSSC Based Series FACTS Controllers for Power System Stability Enhancement in year 2014
2.	Dynamic stability Improvement of Power system using FACTS based Controller, in Year 2016.

#### M.Tech THESIS GUIDED:

S.NO	TITLE OF THE THESIS	YEAR
1.	Performance Analysis of Power System With different facts Devices using Newton Raphson Load Flow	2016
2.	Performance Analysis of Different Types of PV Testing	2016
3.	Load Frequency controller interconnected power system in-coordination with SSSC and RFB through AC/DC link	2016
4.	Optimal Placement of Distributed Generation system in Radial Distribution Network for Loss Reduction	2016
5.	Inter Area Oscillation Damping of Power system using FACT'S Devices and PSS	2016
6.	A new Interleard IC DC converter with High Voltage Gain and Reduced Switching Stress Voltage	2016
7.	Study of SPV Characteristics under Partially Shaded -Condition and its MPPT	2016
8.	New Controlled Strategy for three phase Grid Connected Pulse width Modulated voltage Source Inverter without phase locked loop	2016
9.	Maximum Power Point Tracking of a Photovoltaic system by Implementation of Fuzzy Logic	2016
10.	Reactive Power Compensation through STATCOM by passivity based sliding mode control	2016
11.	Simulation of Buck converter for Charging a battery from a Solar Photovoltaic system with MPPT.	2016
12.	Explicit Modelling of 3 phase grid connected photo voltaic system	2015
13.	Optimal Design and Feasibility study of Renewable Hybrid energy Systems	2015

	using Fuzzy logic Controller	
14.	Economic analysis, modelling and implementation of Hybrid stand alone system	2015
15.	Design Analysis of Power Supply for Aditya Tokamak	2015
16.	Fuzzy logic based Speed control of D/C Machines	2015
17.	Transmission loss minimization with TCSC using PSO technique.	2015
18.	Design of SMIB SSSC Based Controller Using Differential Evolution algorithm	2014
19.	A Case Study of Energy Audit and Its impact at IFCAL	2014
20.	Design of GA optimized SSSC based FACTS controller	2014
21.	Application of AI Technique for economic load Dispatch	2013
22.	PSO technique for SSSC Based controller design to improve power system stability	2013
23.	Design of SSSC based damping controller using AI technique	2012
24.	Design of UPFC Supplementary Damping Controller	2012
25.	Application of GA Technique for parameter optimization of SSSC Based FACTS controller	2011
26.	Design of FACTS controller using AI Technique	2011
27.	Application of AI Techniques for Optimum allocation of Generating units	2011
28.	Steady state and Dynamic Performance of Induction Motor and use of Fuzzy Controller	2010
29.	Vector Control of 3 phase Induction Motor using Fuzzy Logic Controller	2009
30.	Modelling , Simulation, Analysis and Control of 3 phase Induction Motor	2008

## B.Tech PROJECTS GUIDED:

S.NO	TITLE	Year
1.	Speed Control of Single Phase Induction Motor Using ATmega16 Microcontroller	2016
2.	Simulation and Analysis of Photovoltaic Standalone system using MPPT	2016
3.	SOLAR based chopper drive for DC motor	2015
4.	Standalone PV system using MPPT	2015
5.	Over temperature protection relay for motor using microcontroller	2013
6.	Smart prepaid energy meter with full load and neutral tampering protection	2013
7.	Automatic power cut	2013
8.	Speed control of Induction Motor Drives	2013
9.	Axial flux machine-A case study and its simulation using Lab view	2012
10.	Speed control of D.C. Motor using Fuzzy Controller	2012
11.	Microcontroller based Stepper Motor Control(Hard ware)	2012
12.	Transformer testing using Matlab/Simulink	2011
13.	Optimum Allocation of Generators to meet the load demand using Computational Intelligence technique	2011
14.	Induction Motor Analysis and Control	2010
15.	Induction Motor tests using Matlab/Simulink	2010



16.	24-Hours Timer Circuit	2010
17.	Microcontroller based DC Motor Drives(Hard ware)	2009
18.	12V, DC Power Supply(Hard ware)	2005
19.	V/F Method of Speed Control of Induction Motor (Hard ware)	2004
20.	Speed Control of DC Motor using PWM Generated by “C” Programme(Hard ware)	2004

**CONFERENCE/WORKSHOPS ORGANIZED/ATTANDED:**

S.NO	Title	Attended/organized	YEAR
1.	One day workshop on “Real Time Issues on Power Engineering” organized by NIST Berhampur Orissa, 11th December 2007.	Attended	2007
2.	National Workshop on “Reactive Power Compensation” organized by ISTE chapter in association with Department of Electrical Engineering and sponsored by DRIMS 5th January 2008.	Attended	2008
3.	NITTER Chandigarh MHRD AICTE sponsored program “Recent Trend in Antenna Technology” at KIIT BBSR 28th July 2008to 8th August 2008.	Attended	2008
4.	A short term training program on “Maintenances of Electrical Machines” on15th January to 19th January 2007 at NITTER Kolkata	Attended	2007
5.	A short term training program on “MATLAB, SIMULINK LABVIEW for engineering applications” 19th February-23rd February 2007 at NIT Rourkela.	Attended	2007
6.	“A short term course on Advanced Control System Technique and their applications” 25th June to 6th July 2007 at NIT Rourkela.	Attended	2007
7.	“AICTE sponsored faculty development program in PEDAGOGY” 26th December to January 7th 2007 at KIIT BBSR.	Attended	2007
8.	AICTE-ISTE sponsored short term training program on “INTELLEAGENT SYSTEM AND THEIR APPLICATIONS TO MODERN POWER NETWORKS” 14th May 2002 to 1st June 2002 at UCE Burla.	Attended	2002
9.	National seminar on “Roll of Teachers in Professional Education in changing Scenarios” 19th October 2008 at KIIT University BBSR.	Attended	2008
10.	AICTE sponsored “National Symposium on DSP & AI Technique to emerging trends in Power Energy Systems” 4th & 5th July, 2009, at NIST Berhampur	Attended	2009
11.	38th ISTE National Annual Convention & IFEEES International Conference 19th -21st Dec, 2008 at KIIT University BBSR.	Attended	2008
12.	AICTE sponsored staff development programme on “Modern Power System Operation & Control” 3rd-15th August, 2009, at C.V.RAMAN College of Engineering Bhubaneswar.	Attended	2009
13.	International congress on Renewable Energy (Renewable for development of Rural Areas) 27-29 November, 2013, at KIIT University, Bhubaneswar, Odisha.	Attended	2013
14.	Regional science congress on “Inovations in Science & Technology for Inclusive Development” under the aegis of ISCA, Bhubaneswar Chapter, Organized by KIIT University & KISS, during 27-28 January, 2014, at Bhubaneswar, Odisha.	Attended	2014
15.	Conducted three days workshop on “ <b>MATLAB</b> application in power system & power electronics” 18th-20th Jan 2013, at school of Electrical Engineering, KIIT-University.	Organised	2013

**SUBJECTS TAUGHT:**

S.NO	SUBJECT CODE	SUBJECT NAME
1.	EE-2005	DC Machines and Transformers
2.	EE-2010	AC Machines
3.	EE-2016	Electrical Measurements and Measuring Instruments
4.	EE-4087	Electrical Machine design
5.	EE-4039	Power quality
6.	EE-6101	Power System Dynamics
7.	EE-6126	Advance Power System Protection
8.	EE-6128	Power System Transient
9.	EE-6201	Generalized theory of Electrical machine
10.	EE-6125	Safety and Reliability of Power System
11.	EE-6193 EE-6294 EE-6393	Modelling and Simulation