

Resume



Name : Prof. Ashwani Chandel
Designation : Professor
Department : Electrical Engineering
Qualification : Ph.D (IIT Roorkee), M.E. Electrical, PEC, Chandigarh, B.Tech (Electrical), Kerala University
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Other Profile Links

Research Gate Link :

Personal Web Link :

Google Scholar Link :

Research Profile

Research Interests : Power Quality, Power system harmonics, Condition monitoring, Distribution system operation, and planning of power system

Brief Research Profile : With the penetration of distributed generation in the power system, operation and control of power system have become very challenging. Therefore, modern solution techniques are required to solve the complex and difficulty power system problems.

Qualification

Name of the Degree	Year Of Passing	Institute/University
1. Higher Secondary Part 1	1980	HPBSE, Shimla
2. Pre Engineering	1982	Panjab University Chandigarh
3. B.Tech Electrical	1987	Kerala University
4. M.E. Electrical	1990	Panjab University Chandigarh
5. Ph.D.	2005	IIT Roorkee

Publications

Year	Journal	Publication	Indexed In
2000	IETE Journal of Research	Design and Development of Dielectric based Electrostatic Microactuators	SCI
2004	International Journal of Electrical Power and Energy Systems (Elsevier)	Determination of Location of Multiple Harmonic Sources in a Power System	SCI
2005	IEE Proceedings Generation, Transmission and Distribution Part C	A simple technique for placement of meters for estimation of harmonics in the electric power system	SCI
2005	IEEE Transactions on Power Delivery	Genetic Algorithm Based Meter Placement for Monitoring of Harmonic Sources	SCI
2005	International Journal of Electrical Power Components & Systems	Dynamic State Estimation of Power System Harmonics with Bad Data	SCI
2006	International Journal of Electrical Power and Energy Systems (Elsevier)	Robust Dynamic State Estimation of Power System Harmonics	SCI
2007	Journal of Low Power Electronics	Investigations on Short-Circuit Power Dissipation in Repeater Loaded VLSI Interconnects	Scopus
2007	IETE Journal of Education	SPICE for Nano-regime VLSI Design- A Simulation Study	Ulrich's Periodicals
2009	Microelectronics Internationa	Analysis of non-ideal effects in coupled VLSI interconnects with active and passive load variations	Scopus
2010	International Journal of Computer and Electrical Engineering	Genetic Algorithm Based approach to Circuit Partitioning	EI (INSPEC, IET)
2011	TELKOMNIKA Telecommunication, Computing, Electronics and Control	Inverse S-Transform Based Decision Tree for Power System Faults Identification	Scopus
2011	Journal of Shanghai Jiaotong University (Science)	Efficient Clustering and Simulated Annealing Approach for Circuit Partitioning	(Scopus, SCImago)
2011	TELKOMNIKA Telecommunication, Computing, Electronics and Control	Transient Stability Enhancement of the Power System with Wind Generation	Scopus
2011	International Journal of Soft Computing	Fuzzy Logic Based Approach for Condition Monitoring of Hydro Generator	Scopus
2012	International Water Power and Dam Construction	Refurbishment of Indian Hydro Power Plants	SCImago
2012	International Water Power and Dam Construction	Hydro Scenario in India	SCImago
2012	International Review of Electrical Engineering (IREE)	Transformer Winding Fault Classification Based on Pattern Recognition Technique	Scopus
2013	IETE Journal of Research	Bearing Fault Classification based on Wavelet Transform and Artificial Neural Network	SCI, Scopus
2013	Springer-Arabian Journal for Science and Engineering	Transient Stability Enhancement of a Grid with HVDC Interconnected offshore Wind Farm Using STATCOM	SCI, Scopus
2013	Springer-Arabian Journal for Science and Engineering	Inverse S-transform based identification of nonlinear loads	SCI, Scopus
2015	IETE Journal of Technical Review	Simultaneous Placement of PMUs and Communication Infrastructure in WAMS using NSGA-II	SCI, SCOPUS

Year	Journal	Publication	Indexed In
2015	IET proceedings Science, Measurement and Technology	Hybrid Power System State Estimation using Taguchi Differential Evolution Algorithm	SCI, SCOPUS
2015	Neurocomputing - Journal - Elsevier	A robust LWS estimator including anomaly detection and identification in power system	SCI, SCOPUS
2015	Renewable and Sustainable Energy Reviews	Refurbishment and uprating of hydro power plants—A literature review	SCI, SCOPUS
2016	Energy, Elsevier Publication	Power system dynamic state estimation using prediction based re-initialisation technique	SCI, SCOPUS
2017	Measurement (Elsevier Publication)	Optimal PMU placement for power system observability using Taguchi binary bat algorithm	Scopus
2017	Soft Computing (Springer Publication)	Power System Static State Estimation using JADE-Adaptive Differential Evolution Technique	SCOPUS
2017	IETE Technical Review	Performance analysis of alternative solid dielectrics of transformers with a blend of mineral and silicon oils	SCI, SCOPUS
2017	International Journal of Electrical Engineering and Informatics, IJEEI	Performance analysis of cellulose and Nomex impregnated oil filled power transformers	SCOPUS
2017	Journal of Renewable and Sustainable Energy (JRSE)	Expert System for Condition Monitoring of Power Transformers using Fuzzy Logic	SCI, SCOPUS
2017	IET Science Measurements and Technology	Condition assessment of power transformers based on multi-attributes using fuzzy logic,	SCI
2017	International Journal of Electrical Engineering and Informatics, IJEEI	Expert System for Health Index Assessment of Power Transformer	SCOPUS
2019	Insight-Journal of the British Institute of Non Destructive testing	Influence of accelerated thermal aging on performance of alternative solid dielectrics for power transformers	SCI
2016	International Journal of Electrical Engineering and Informatics	Fuzzy Logic Expert System for Optimum Maintenance of Power Transformers	SCOPUS
2016	Neurocomputing - Journal - Elsevier	Power system static state estimation using a least winsorized square robust estimator	SCI, SCOPUS
2016	i-Managers Journal of Electrical Engineering	Effect of Ambient conditions on performance of power transformers	UGC
2014	i-manager's Journal on Electrical Power Systems Engineering	Optimal Multi-Objective Hybrid Measurement Placement using NSGA-II	Ulrich's Periodicals
2012	Procedia Engineering	Optimization of Hydro Power Plant Design by Particle Swarm Optimization (PSO)	SCOPUS
1994	ISTE Journal of Education	Enhancement of Placement Activities in Remotely Located Technical Institutes	--
2007	IETE Journal of Education	SPICE Simulation a Case Study	British Library
2010	Indian Journal of Power and River Valley Development	Refurbishment and Uprating of Old Hydro Power Plants	--
2012	Electrical India Magazine	Group Harmonics Identification Using Empirical Mode Decomposition	Magazine
2017	i-Managers Journal of Power System	Experimental effectiveness estimation of inhibitors on oxidation degradation of oil impregnated paper insulation in power transformers	Proquest
2019	British Journal of Non-Destructive Testing	Influence of accelerated thermal aging on performance of alternative solid dielectrics for power transformers	SCOPUS
2020	Lecture Notes in Electrical Engineering, Book Chapter	A Hybrid Framework for Fault Classification and Location in Power Distribution System Using Wavelet and Support Vector Machine	SCOPUS
2020	British Journal of Non-Destructive Testing	Influence of electrical and thermal ageing on the mineral insulating oil performance for power transformer applications	SCOPUS
2020	Arabian Journal for Science and Engineering	A Passive Islanding Detection Algorithm Based on Modal Current and Adaptive Boosting	SCI

Edited Book/Book Chapter

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
Chapter	Thermal Evaluation and Oxidation Stability of High Temperature Alternative Solid Dielectrics of Power Transformers in Mixed Oil	Springer	Manoj Kumar, Chilaka Ranga and Ashwani Kumar Chandel, Ashish Kumar	Series Print ISSN 1876-1100	2018
Chapter	Prospective Graphene Based Through Silicon Vias in 3-Dimensional Integrated Circuits	Institution of Engineering and Technology	M.G. Kumar, Y.Agrawal, R.Dhiman and Ashwani Kumar	ISBN: 9781839530555	2019
Chapter	Performance Analysis of Mixed Wall CNT Interconnects using Colliding Bodies Optimization	IGI Global Publisher, USA	G. Kumar, Y. Agrawal, R. Chandel, Ashwani Kumar	SBN13: 9781799813934	2019

Research Projects

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
PI	Research	Identification of harmonic sources in power system	CSIR	01/04/2009	31/03/2012	Rs. 6,46,807/-	Completed	NA
Mentor	Research	Condition Assessment and harmonic analysis of Transformers	TEQIP	09/03/2015	30/05/2016	Rs. 1.52/- Lacs	Completed	Chilaka Ranga
Mentor	Research	Condition Assessment and harmonic analysis of Transformers	TEQIP-II	22/07/2015	30/05/2016	Rs. 0.98	Completed	Kuldeep Kumar Bansal
Co-PI	Research	Rapid and Precise Detection of Grid Voltage Magnitude and Phase for Low Voltage Ride-Through Capability in PV Systems	CSIR	10/10/2	31/10/2		Ongoing	-

Research Supervision

Programme Name	Scholar Name	Research Topic	Status	Year	Co-Supervisor
Ph.D	Gargi Khanna	Investigations & mitigation of Non-Ideal effects in VLSI Interconnects	Awarded	2007	Prof. Rajeevan Chandel

Programme Name	Scholar Name	Research Topic	Status	Year	Co-Supervisor
Ph.D	Sandeep Singh Gill	VLSI circuit partitioning using evolutionary optimization techniques	Awarded	2012	Prof. Rajeevan Chandel
Ph.D	O.P. Rahi	Refurbishment and Uprating of Hydro Power Plants in Himalayan Region	Awarded	2013	Dr. M.G. Sharma
Ph.D	B. Vedik	Wide Area Monitoring of Power Systems Using Phasor Measurement Units	Awarded	2016	
Ph.D	Chilaka Ranga	Performance Evaluation and Health Assessment of Power Transformers	Awarded	2018	
Ph.D	Nimish Bhatt	Distribution System	Ongoing	2017	
Ph.D	Sukriti Tiwari	State Estimation of Distribution System	Ongoing	2018	
M.Tech	Gaurav Guleria	Power Quality Problems classification using wavelet and artificial neural network	Awarded	2007	
M.Tech	Pooja Toki	Dynamic Estimation of Power System Harmonics	Awarded	2007	
M.Tech	Thulasi Naik	Optimal location of FACTS Device to Enhance the Power Transfer Capability	Awarded	2008	
M.Tech	Parveen Sharma	Optimal Power Flow considering Fact Devices	Awarded	2008	
M.Tech	Ajay Sharma	Effect of various loads on the power quality	Awarded	2009	
M.Tech	Denanath	State Estimation of Power System	Awarded	2009	
M.Tech	Anuj Bhanswar	Recognition of Harmonics Sources in a Power system	Awarded	2010	
M.Tech	Shikar Mahajan	Modal Analysis of Power System using signal processing	Awarded	2010	
M.Tech	P. Srikanth	Power quality signatures for faults and non linear loads identification using digital signal processing techniques	Awarded	2011	
M.Tech	K.A. Anil	Stability Enhancement of Hydro Power Plant Using PID Derivative Filter Governor Controller	Awarded	2011	
M.Tech	Sujith P Mohandas	Transient Stability Analysis of Wind Turbine Connected to the Grid and Enhancement using FACTS	Awarded	2011	
M.Tech	Syatendra Kumar	Economic Load Dispatch Using FACTS Device	Awarded	2011	
M.Tech	Amit Kumar Yadav	Optimal Placement of Capacitor in Electrical Power Distribution System	Awarded	2011	
M.Tech	B. Vedik	Reverse Harmonic Load Flow Analysis	Awarded	2012	
M.Tech	Amit K. Verma	Optimal Allocation of Wind Turbine For Minimization of Distributed System Losses	Awarded	2012	
M.Tech	Mrinal Ranjan	Multi-objective Scheduling of a power system	Awarded	2012	
M.Tech	Sanjay Agarwal	Intelligent System for condition assessment of Transformer	Awarded	2012	
M.Tech	Raj Kumar Patel	Condition Monitoring of Rotating Machines using Vibration signals	Awarded	2012	
M.Tech	B. Raja Shekhar	Optimal meters placement for power system hybrid state estimation	Awarded	2013	
M.Tech	Geeta Joshi	Optimal Capacitor Placement in distribution system	Awarded	2013	
M.Tech	Ram Satya Prakash	Life assessment of power transformers using Fuzzy Logic	Awarded	2013	
M.Tech	Amod Kumar	Condition Monitoring of Paper Insulation using Furanic Analysis of Insulating Oil	Awarded	2013	
M.Tech	Nitesh	Modelling and simulation of FACTS controller in optimal power flow	Awarded	2014	
M.Tech	Chanderpal Singh	Power flow tracing and loss allocation	Awarded	2014	
M.Tech	Nitin N.	Design of PID controlled power system stabilizer for stability studies using evolutionary techniques	Awarded	2014	
M.Tech	Preeti Sonkar	Integrated tuning of PID derivative filter controller for power system	Awarded	2014	
M.Tech	Sachin Tyagi	Generation-Transmission expansion planning	Awarded	2014	
M.Tech	Vivek Rastogi	Effect of PST on fault analysis	Awarded	2015	
M.Tech	Rohit Keshiv	Voltage flicker mitigation using D-STATCOM	Awarded	2015	
M.Tech	Satyajeet Anand	Condition monitoring of transformer using HPLC	Awarded	2015	
M.Tech	Yogender Pratap Singh	Condition monitoring of transformer using fuzzy logic	Awarded	2015	
M.Tech	P. Naveen	Economic dispatch and optimal power flow using symbiotic organisms search	Awarded	2016	
M.Tech	Bharat Singh	Modeling and analysis of saturated synchronous machine under short circuit conditions	Awarded	2016	
M.Tech	Kalpna	Distribution system reconfiguration using SPSO in presence of DGs	Awarded	2016	
M.Tech	Kuldeep Kumar Bansal	Aging Analysis and diagnostic of power transformer insulation with inhibitors	Awarded	2016	
M.Tech	Manoj Kumar	Performance Evaluation of High Temperature Solid Dielectrics of Power Transformer with a Mix of Mineral and Silicon Oils	Awarded	2017	
M.Tech	Ashish Kumar Mishra	Furfural analysis for assessing degradation of accelerated thermally stressed alternative solid dielectrics of power transformers	Awarded	2017	
M.Tech	Anjali Kumari	Evaluation of Health Index and Fault Analysis of Transformers using Simplified Fuzzy logic Technique	Awarded	2017	
M.Tech	Sukriti Tiwari	Voltage Stabilization with a Novel Hybrid Controller using Series and Shunt Combination of FACTS Devices	Awarded	2018	
M.Tech	Souvik Sengupta	Transient Stability Enhancement of a Hybrid Wind-PV Farm incorporating a STATCOM	Awarded	2018	
M.Tech	Shashank Yadav	Transient Stability Assessment in Multi machine power system by using hybrid power flow controller	Awarded	2018	
M.Tech	Sridhar Batlu	Optimal Distribution System Reconfiguration, DG Sizing and Placement Using Meta-Heuristic Techniques	Awarded	2019	
M.Tech	Satyajit Panigrahy	Hybrid Technique for Fault Classification and Location combining Wavelet Transform and Support Vector Machine for a distribution network	Awarded	2019	
M.Tech	Himani Mattoo	Voltage Stability Improvement of Wind and PV connected Grid using Hybrid Power Flow Controller	Awarded	2020	
M.Tech	Amal Lazar	Reactive Power and Network Voltage Quality Control of Grid using STATCOM and Active Power Filter	Awarded	2020	
M.Tech	Ankush Sharma	Impact of UPQC on Power Quality in a Distribution System	Awarded	2020	

Patents

Name	Reg./Ref.No.	Date Of Award/Filing	Organization	Status
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Teaching

Programme Name	Subjects Taught	From	To	Credits
1. Lecturer	Electrical, NIT Hamirpur	20/08/1991	19/08/1997	6 Years
2. Sr. Lecturer	Electrical, NIT Hamirpur	20/08/1997	19/08/2002	5 Years
3. Selection Grade Lecturer	Electrical, NIT Hamirpur	20/08/2002	31/12/2005	3 Years, 4 Months
4. Associate Professor	Electrical, NIT Hamirpur	01/01/2006	08/03/2013	7 Years, 2 Months
5. Professor	Electrical, NIT Hamirpur	09/03/2013		Conti...

Administrative Responsibilities

Position Held	Organization	From	To	Remarks
Chief Warden Hostels	NIT Hamirpur HP	07/17/2009	10/28/2010	10
Proctor	NIT Hamirpur HP	20/11/2012	23/12/2014	28
Head of Department	Electrical Dept, NIT Hamirpur HP	18/10/2014	29/09/2016	2010,23
QIP Coordinator	NIT Hamirpur HP	06/03/2017		12
IE(I) Coordinator	NIT Hamirpur HP	12/09/2017		2014,29
Coordinator Institute Networking	NIT Hamirpur HP	06/02/2006	12/02/2008	09

Expert Talks

Title	Place	Year	Description
Energy Efficient Building	NIT HMR	2010	AICTE summer school on Intelligent Buildings
Methods of Transformer Cooling	NIT HMR	2010	Power Transformer Engineering & Practice-TIFAC-CORE
Effective lesson planning	MIT Bani	2011	Induction Training Programme
Introduction to MATLAB and its application	NIT HMR	2012	NIMBUS MATLAB WORKSHOP
Graphics handling and MATLAB Programming	NIT HMR	2012	NIMBUS MATLAB WORKSHOP
Multi objective optimization techniques	IIT Mandi	2012	STC on renewable energy
State estimation of power system	IIT Mandi	2012	STC on renewable energy
Design of Substation Earthing system	NIT HMR	2012	TIFAC-CORE STC for Working Engineers
Power System Faults Analysis	NIT HMR		TIFAC-CORE STC for Working Engineers

Professional Activities

Name of Activity	Role	Duration	Organization
BDV of Oils	HPSEBL, IPP	Dr. Ashwani Kumar	-

Courses Organized

Category	Type	Title	Venue	From	To	Designation
stc	National	VLSI Design & Optimization Techniques (VDOT 2006)	NITH	05/06/2006	09/06/2006	-
conference	National	Design Techniques for modern electronic devices, VLSI & Communication systems DTVC-2007	NITH	14/05/2007	15/05/2007	-
fdp	National	Applications of MATLAB, OrCAD	NITH	30/06/2008	11/07/2008	-
fdp	National	SPICE in Engineering MOS-08	NITH	12/07/2008	21/07/2008	-
fdp	National	Design Techniques for VLSI & Nanotechnology DTV-08	NITH	06/07/2009	10/07/2009	-
fdp	National	Application of MATLAB in Engineering MAT-09	NITH	18/12/2009	22/12/2009	-
workshop	National	SMMP Workshop ERA-10	NITH	20/05/2010	21/05/2010	-
fdp	National	Power Quality Problems and mitigation methods	NITH	05/06/2010	09/06/2010	-
symposia	National	Hydro Power Development in Himalayan Region (Hydro-2010)	NITH	06/12/2010	07/12/2010	-
workshop	National	IPR-12	NITH	25/08/2012	25/08/2012	-
workshop	TIFAC-CORE	Seminar on Power System Faults	NITH	23/02/2013	23/02/2013	-
symposia	National	Power generation from Renewable energy sources	NITH	23/03/2013	24/03/2013	-
stc	National	Power Quality in Deregulated Power System with MATLAB Applications (PQDPS-13)	NITH	15/07/2013	19/07/2015	-
symposia	TIFAC-CORE	Seminar on General Repair tools in Electrical power system	NITH	26/10/2013	26/10/2013	-
stc	National	Power Quality in Deregulated Power System with MATLAB Applications (PQDPS-14)	NITH	05/06/2014	09/06/2014	-
stc	National	Power Quality in Deregulated Power System with MATLAB Applications (PQDPS-16)	NITH	06/06/2016	11/06/2016	-
workshop	National	Impact of High Temperature stresses on Aging of Insulation	NITH	28/09/2016	28/09/2016	-
stc	National	Economic Operation of Power System with MATLAB	NITH	19/06/2017	24/06/2017	-
stc	National	Modern Trends in Electrical Apparatus Repair Maintenance and Safety	NITH	18/07/2017	23/07/2017	-
workshop	National	Real Time Simulation in Electrical Domain Using Typhoon HIL and MATLAB	NITH	03/10/2017	08/10/2017	-
conference	International	Emerging Trends in Engineering, Innovations & Technology management [ICET:EITM-2017]	NITH	16/12/2017	18/12/2017	-

Date :

Place :

Signature