

Resume



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Other Profile Links

Research Gate Link :

Personal Web Link : <http://14.139.56.4/portfolios/index.php?nith/dr-r-k-jarial84>

Google Scholar Link :

Research Profile

Research Interests : Power Electronic Systems, High Voltage Engg., Condition Monitoring of Power Transformers, Electrical Machines and Energy Systems

Brief Research Profile : Condition assessment of power transformers has been a widely open multi engineering disciplinary field of research. With emerging trends in newer insulation materials, IOT applications and sensors, the trends of built-in-on line tools to monitor the key electrical health parameters have remarkable impact in asset management. The researchers have established that there exist lot of scope of academic collaboration between academicians, power equipment manufacturers and application field utility engineers for putting up co-ordinated effort to solve pertinent issues concerning enhancement of useful life span of existing substation power apparatus/transformers in preventing catastrophic failures. It can also help in ensuring smooth reliable supply of electric power to all stakeholders in national endeavor.

Qualification

Name of the Degree	Year Of Passing	Institute/University
1.High School (10th)	1981	SGN Khalsa High School,Jagadhri Workshop, Distt. Ambala (Haryana) HBSE, Bhiwani, Haryana
2.Pre- Engg. (12th)	1984	MLN College,Yamuna Nagar Distt. Ambala (Haryana)
3. Bsc. Engineering (Electrical) - 5 Year Program	1989	REC Kurukshetra (Haryana)
4.M.Tech (Electrical Engineering)	1992	REC Kurukshetra, (Haryana)
5. Ph.D.	2007	MNIT Jaipur (Rajasthan)

Publications

Year	Journal	Publication	Indexed In
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Edited Book/Book Chapter

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
Book	Computational Techniques for Transformer Diagnostics-practical applications	LAMBERT Academic Publishing	U. Mohan Rao, R K Jarial	978-3-659-85946-5	2016
SIE Book	Problems and Solutions in Electrical Machinery	McGraw Hill Education (India) Pvt. Ltd.	S D Umans (SOS Call- R K jarial))	978-1-25-902886-1	2013
Book Chapter	Soft Computing in Condition Monitoring and Diagnostics of Electrical and mechanical Systems	Springer Nature Singapore P. Ltd.	Hasmat et.al	978-981-15-1532-3-4	2020

Research Projects

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
PI	R & D Faculty Individual Project	Automated Grain Drying System	Centre of Excellence Grant	01/11/1996	03/12/1998	Rs. 1.1 Lacs	Completed	-
Co-PI	MODROBS	MODROBS in High Voltage Lab. EED, REC Hamirpur	MHRD, GOI Delhi	23/03/1998	30/05/1999	Rs 5.0 Lacs	Completed	Dr M N Bandyopadhyay (PI)
Co-PI	MODROBS	MODROBS in High Voltage Lab. EED REC Hamirpur	MHRD, GOI Delhi	24/03/1999	30/06/2000	Rs 5.0 Lacs	Completed	Dr M N Bandyopadhyay (PI)
Co-PI	R & D Project	Wheeling Transactions and Multi-area Interconnection of Power System network	MHRD, GOI Delhi	31/03/2000	15/07/2004	Rs10.0 Lacs	Completed	Prof. Y R Sood (PI)
Co-PI	MODROBS	MODROBS in High Voltage Lab. EED REC Hamirpur	MHRD, GOI Delhi	28/03/2001	15/07/2004	Rs 10.0 Lacs	Completed	Dr M N Bandyopadhyay (PI)

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
PI & Co-ordinator	Institute Development Industry Sponsored Triangular Linkage Project under VISION-2020 launched by Hon'ble President Late Dr APJ Abdul Kalam ji	Creation of Self Sustainable TIFAC - Centre of Relevance & Excellence (CORE) in Power Transformer Diagnostics	HP State Electricity Board Shimla, TIFAC (DST), Delhi and NIT Hamirpur (MHRD,GOI), Delhi	20/11/2000	01/02/2006	Rs 5.3 Crores	From Feb. 2006 onwards, the charge of Co-ordinator,TIFAC Centre has been assigned to Head,EED from time to time. The Apex RMC Board, TIFAC CORE has declared completion of its implementation period as successful in its 12th meeting held on 01/09/2017. Now, proactive efforts are being made to run this Centre as self sustainable service providing entity in thematic area in State of Himachal Pradesh.	Prof. M N Bandyopadhyay (Advisor), Prof. Y R Sood (Mentor)
Co-PI	MODROBS	MODROBS in High Voltage Lab. EED NIT Hamirpur	MHRD, GOI Delhi	31/03/2005	18/08/2009	Rs 12.0 Lacs	Completed	Prof. Y R Sood (PI)
PI	MODROBS	MODROBS in Power Electronics Lab. EED NIT Hamirpur	MHRD, GOI Delhi	31/03/2005	21/04/2010	Rs 12.0 Lacs	Completed	Prof. Y R Sood (Co-PI)
Faculty Mentor	R & D Project	Smart monitoring and control of electric appliances for a village in Himachal Pradesh	TEQIP-II Grant	13/11/2013	07/08/2014	Rs 37,991/-	Completed	-
Faculty Mentor	R & D Project	Design, Implementation and Performance analysis of Power Factor Correction Boost Converter using ADP1047 Converter	TEQIP-II Grant	12/01/2015	21/05/2015	Rs 71,000/-	Completed	-
Faculty Mentor	IEDC, Innovation	Microgrid Implementation	DST, Delhi	22/08/2018	18/09/2020	Rs 60,000/-	Completed	-
Faculty Mentor	Himachal Pradesh Chief Minister Funded Innovative Startup Development Scheme through Incubation Cell,NIT Hamirpur	Design and Development of HHO Generator	Directorate of Industry, Govt. of Himachal Pradesh	04/07/2019	18/09/2020	Incubate to get monthly Rs 25000.0 towards development of prototype	Completed	Dr Param Singh, Asstt. Prof. MED, NITH

Research Supervision

Programme Name	Scholar Name	Research Topic	Status	Year	Co-Supervisor
M.Tech	Renu Thakur	Study and Analysis on EMI/EMC issues	Awarded	2008	Dr Y R Sood
M.Tech	Naveen Kumar Sharma	Experimental Investigation of DGA of Transformer Oil	Awarded	2010	Dr Y. R. Sood
M.Tech	Ravinder Singh	Design & Performance Analysis of a FLC for SCADA System	Awarded	2011	Dr. Y R Sood
M.Tech	Virender K. Sharma	Failure analysis of power transformer	Awarded	2011	-
M.Tech	Vinay Kumar	Failure analysis of distribution transformer	Awarded	2011	-
M.Tech	Deven Vatsal	Electrical Health Monitoring of an Electrical apparatus by Insulation Analyzer	Awarded	2011	Dr. Y R Sood
M.Tech	Amit Kumar	Aging Characteristic of Porcelain Insulator	Awarded	2011	Dr O.P.Rahi
M.Tech	Rajanish Kumar Kaushal	Transmission Expansion planning in deregulated power sector	Awarded	2012	Dr. Y R Sood
M.Tech	Ranga Chilaka	An Investigation of novel approach for fault diagnosis in power electronics converters: the case of sub synchronous cascade drive	Awarded	2012	-
M.Tech	Mohan Rao Ungarala	Expert system in transformer diagnostics	Awarded	2012	-
M.Tech	Kapil Gandhi	Experimental investigation of accelerated stress on transformer insulation using FITR spectroscopy	Awarded	2012	Dr. Y R Sood
M.Tech	Sunandan Kumar	Rotor fault diagnosis of induction motor using current signature analysis	Awarded	2012	-
M.Tech	Navin Chandra Joshi	Simulation of distribution transformer with internal incipient faults	Awarded	2012	Dr Y R Sood
M.Tech	Tarkeshwar	To investigate EMI/EMC phenomena in electric and electronic gadgets	Awarded	2012	Dr Y R Sood
M.Tech	Kiran Jumar Kandregula	Condition monitoring of induction motor and reliability estimation - An industrial case	Awarded	2012	Dr. Rajiv K Sharma
M.Tech	Hasmat	Application of artificial intelligence for incipient fault diagnosis and condition assessment of power transformer	Awarded	2012	-
M.Tech	Rakesh Thaplyal	Design and temperature rise analysis of cascade H-bridge solid state transformer	Awarded	2012	Dr. Y R Sood
M.Tech	Suryakant	Diagnosis of variable induction motor speed drives	Awarded	2012	-
M.Tech	Suresh Kumar Dogra	Monitoring of Peripheral Temperature of Electrical apparatus using Infrared Thermal imaging device (HOT-Shot)	Awarded	2013	Dr. Y R Sood
M.Tech	Pankaj Shukla	Experimental Investigation regarding prediction of residual life and health index of transformer using fuzzy logic	Awarded	2013	Dr Y R Sood
M.Tech	Gurmeet Singh	Condition monitoring of PLC Controlled Induction Motor Drive	Awarded	2013	-

Programme Name	Scholar Name	Research Topic	Status	Year	Co-Supervisor
M.Tech	Sonu Kumar	Study and analysis of Interfacial Tension of Transformer Oil and Impact on Assessing health Conditions of a Power Transformer	Awarded	2013	-
M.Tech	Mithun Mondal	Earth Ground Resistance Measurement & Design of Earthing System for Electrical Grounding	Awarded	2013	Dr Zakir Husain
M.Tech	M. Raghuram	Modulation and Protection Techniques in Matrix Converter Topology for Multi Converter Operation	Awarded	2014	Dr Y R Sood
M.Tech	Priyesh Kumar Pandey	Formulation of Health Index and End-of-Life assessment of Power Transformers	Awarded	2014	-
M.Tech	Abhas Kumar Singh	Electricity Pricing in Deregulated Power Sector	Awarded	2014	Dr Y R Sood
M.Tech	Harmendra Singh	To investigate the Insulation Aging Of Transformer by BDV, Moisture, C & Tan Delta and DC Resistivity Measurement	Awarded	2014	Dr Y R Sood
M.Tech	Madan Lal	Modelling Of Partial Discharge activity in Solid Dielectric material	Awarded	2015	-
M.Tech	Shrikant	Residual Life assessment of power Transformer	Awarded	2015	-
M.Tech	Abhishek Singh	Condition assessment of OIP type power transformer bushing by latest dielectric response technique	Awarded	2015	-
M.Tech	Jagnandan Negi	Assessment of Oil-paper Insulation of Aged Power Transformer	Awarded	2015	-
M.Tech	Alok Kumar	Mathematical Modelling of winding dislocation of Transformer by Sweep Frequency Response Analysis	Awarded	2015	-
M.Tech	Natla Sudheer Reddy	Thermal evaluation of rotating machine insulation paper	Awarded	2016	-
M.Tech	Santanu Kumar Seth	Analysis of electrical health of power transformer bushing and winding using insulation analyser	Awarded	2016	-
M.Tech	Katuru Subramanyam	Exploration and feasibility of vegetable oil for electrical apparatus	Awarded	2016	-
M.Tech	Gaurav Upadhyay	Investigation of forces using electromagnetic analysis of triangular wound core transformer	Awarded	2016	-
M.Tech	Pavan Kumar Kandregula	Modelling of partial discharge detection and calibration circuits	Awarded	2016	-
M.Tech	Ajay Singh Negi	Estimation of flux level for optimal operation and Improved aging of variable speed matrix converter fed induction motor drive	Awarded	2017	-
M.Tech	Anurag Kumar Burman	Effective interpretation of transformer SFRA signature using multi-resolution decomposition technique	Awarded	2017	-
M.Tech	Alok Richarya	Condition assessment of rotating machine using fuzzy logic based approach	Awarded	2017	-
M.Tech	Veer Singh Meena	Performance analysis of an induction motor drive by direct torque control method using MATLAB simulation	Awarded	2017	-
M.Tech	Rachna Panwar	End-of-life estimation of power transformer using risk based approach	Awarded	2017	-
M.Tech	Md. Sabir Hasan	Solar Photovoltaic Modelling for Extraction of Maximum Power using Artificial Intelligence Based Technique	Awarded	2018	Dr. Chandrasekaran
M.Tech	Neera Yadav	Performance Analysis Nomex Paper	Awarded	2018	Dr. Chandrasekaran
M.Tech	Ankit Chouhan	Comparative Evaluation of Nomex-910 and TUK Insulating Paper Thermally aged in Soya-based Natural Ester Oil	Awarded	2018	Dr Zakir Husain
M.Tech	Sujit Kangsabanik	Condition Monitoring of Bushing of Oil-filled Power Transformers by using Thermo-graphic Tool	Awarded	2018	Dr Zakir Husain
M.Tech	Kingshuk Chatterjee	A novel Prediction Certainty based Graphical Dissolved Gas Analysis Technique for Oil- Filled Power Transformer	Awarded	2018	Dr. Vinay Jadoun
M.Tech	Ujjawal Prakash Bhushan	Evaluation of Health Index Assessment of Power Transformers Located in HPSEB Substation	Awarded	2018	Dr. Vinay Jadoun
M.Tech	Atul Jaysing Patil	Condition Assessment Of Transformers Feeding Steel Mills	Awarded	2020	-
M.Tech	Arush Singh	Reliability Centric Condition Monitoring of Transformers to prevent failures	Awarded	2020	Dr Rajiv K Sharma
M.Tech	Aniket Chaturvedi	Morphological Characterization & Dielectric properties of Nano Composites	Awarded	2020	Dr Jai Prakash

Patents

Name	Reg./Ref.No.	Date Of Award/Filing	Organization	Status
Grain drier for paddy, wheat, oil seeds and similar agricultural material	170629 (A.No.12964)	23/07/1993	Controller of Patents, Patent Office, Calcutta	Granted
Software Implementation of Hostel/ Public Building	Appl. No. 1109/DEL/2012	11/04/2012	Patent Office, New Delhi	Filled

Teaching

Programme Name	Subjects Taught	From	To	Credits
Lecturer	Electrical Engineering, REC Hamirpur (H.P.)	10/10/1994	09/10/1999	05 years
Sr. Lecturer	Electrical Engineering, REC Hamirpur (H.P.)	10/10/1999	30/06/2005	05 Years+
Lecturer (Select. Grade)	Electrical Engineering, NIT Hamirpur (H.P.)	01/07/2005	13/07/2007	02 Years
Assistant Professor	Electrical Engineering, NIT Hamirpur (H.P.)	14/07/2007	30/06/2008	01 Year
Associate Professor	Electrical Engineering, NIT Hamirpur (H.P.)	01/07/2008		12 Years+

Administrative Responsibilities

Position Held	Organization	From	To	Remarks
Resident Warden (Kailash Boys Hostel)	REC Hamirpur (H.P.)	17/10/1994	10/01/1996	10
Faculty Officer -In- Charge(OIC)Students Training & educational tours)EED	EED,REC Hamirpur(H.P.)	26/02/1996	17/09/2020	01
Officer- In-Charge (OIC) High Voltage Lab.	EED,REC Hamirpur (H.P.)	10/11/1994	17/09/2020	1996,17
Warden (Mani Mahesh Boys Hostel)	REC Hamirpur (H.P.)	27/01/1997	28/07/1999	09
PI & Co-ordinator, TIFAC Centre of Relevance and Excellence (CORE) in Power Transformer Diagnostics TIFAC DST Delhi.	REC Hamirpur (H.P.)	20/11/2000	01/02/2006	2020,17
Officer-In-Charge (OIC) Power Electronics Lab.	EED,REC Hamirpur (H.P.)	06/05/2003	02/05/2018	09
Re-Assigned Co-ordinator, TIFAC CORE	NIT Hamirpur (H.P.)	31/08/2012	21/06/2019	2020,28
Co-ordinator(Upkeep Monitoring),NIT Hamirpur	NIT Hamirpur (H.P.)	06/04/2015	30/03/2018	07
Associate Dean (Research and collaborations)	NIT Hamirpur (H.P.)	01/05/2018	01/05/2019	1999,01

Position Held	Organization	From	To	Remarks
Faculty Mentor (Energy Conservation Group)	NIT Hamirpur (H.P.)	27/08/2019		02
Re-Assigned Co-ordinator, TIFAC CORE	NIT Hamirpur (H.P.)	11/09/2020		2006,02

Expert Talks

Title	Place	Year	Description
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Professional Activities

Name of Activity	Role	Duration	Organization
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Courses Organized

Category	Type	Title	Venue	From	To	Designation
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Date :

Place :

Signature