CURRICULUM VITAE

Name : **KALYAN CHATTERJEE**

Present Position : Professor
Dept. of Electrical Engineering
Indian Institute of Technology(ISM), Dhanbad

Date of Joining IIT(ISM) : 17.08.2005

Present Address : Qtr.No: Type-VI, Flat No: C092, IIT(ISM) campus
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Date of Birth : 18.09.74

Marital Status : Married

Religion : Hinduism

Academic Qualifications:

Examination	***Board / university***	***Year***
B.E	North Bengal, Jalpaiguri Govt Engg college	1997
M.E.E	Jadavpur University	1999
Ph.D	Birla Institute of Technology (Deemed University)	2005

Specialisation In M.E.E : Electrical Power System

Project (Final Year M.E) : Development of a user Interface for Power System Education Software

Ph.D Thesis Title : "Development of dual mode and Soft Computing Based control techniques for load Frequency Controller of Interconnected Thermal Power Systems"

Working Experience

Post	*Institution*	*Period*
Lecturer	BIT (Mesra), Ranchi	19.07.1999 to 16.8.2005
Senior Lecturer	Indian School of Mines, Dhanbad	17.8.2005 to 5.2.2007
Assistant Professor	Indian School of Mines, Dhanbad	6.2.2007 to 5.2.2010
Associate Professor	Indian School of Mines, Dhanbad	6.2.2010 to 11.4.2021
Professor	IIT(ISM) Dhanbad	12.4.2021 to till now

Teaching Experience : 26 years (Undergraduate 26years & Postgraduate course 25 years)

Details of Theory Courses taught over and above 6 credits hrs.:(Since the last promotion)

Sl.No.	Name of Course
1	Power System-II
2	Switchgear & Protection
3.	Electrical Technology
4.	Signals & Systems
5.	Power System Stability
6.	Power System Dynamices
7.	Smart Grid Technology
8.	Numerical Simulation for Electrical Engineering
9.	Power System Analysis
10	Soft Computing Techniques

Research Area : Cyber Physical Systems,Soft Computing Techniques application in PowerSystem, Power System Operation and Control, Small Signal Stability, Renewable Energy

No of Ph.D students Guided : 17

Sl.No.	Name of Student	Discipline	Title of Thesis	Year
1	Ananya Chakraborty	Applied Mathematics	Multi Criteria optimization Using Fuzzy Programming Approach and genetic Algorithm Approach	2010
2	Ravi Shankar	Electrical Engineering	DESIGN OF LOAD FREQUENCY CONTROLLER FOR INTERCONNECTED POWER SYSTEM	2015
3.	Jay Singh	Electrical Engineering	Model Order Reduction for Power Systems Control	2016
4.	Ravi Bhushan	Electrical Engineering	Modelling and Control of a Doubly-Fed Induction Generator for Grid-Connected Wind Energy System	2018
5.	B.K. Naick	Electrical Engineering	Performance Analysis of Fuzzy Logic Based MPPT Controller of PV System for Different Opearting Conditions	2018
6.	Dipesh Kumar	Electrical Engineering	Active Power Control Strategies for Wind Energy System	2019
7.	Subhendu Sekhar Sahoo	Electrical Engineering	Fault Ride through Capability of Doubly Fed Induction Generator based Wind Energy Conversion System	2021
8.	Prashant Mani Tripathi	Electrical Engineering	Development of a new control methodology to improve the Fault Ride Through capability of Doubly Fed	2021
9.	Hari Mohan Rai	Electrical Engineering	Early Detection and Diagnosis of Critical Diseases from analysis of Bio-Signals Using Neuro-Fuzzy and Hybrid Neural	2022
10.	Ram veer Singh Sengar	Electrical Engineering	Model Order Approximation and Controller Design	2022

11.	Sandip Kumar Gupta	Electrical Engineering	Control Strategies for Voltage and Frequency in Microgrid Coordinating Different Demand Response Programs	2022
12.	Anirban Mishra	Electrical Engineering	Power quality issues of wind turbine	2022
13	Soumen Biswas	Electrical Engineering	Impact of FACTs Devices on Load frequency control for diverse sources of interconnected power system in deregulated power environment	2022
14	Rajasi Mandal	Electrical Engineering	Load Frequency Control of Doubly Fed Induction Generators in multi-area Power Systems with High Wind Power	2022
15.	Kumari Sandhya	Electrical Engineering	Resilience enhancement of Distribution System via optimal positioning, sizing, and fusion of Distributed Energy	2023
16.	Awaneendra Kumar Tiwari	Electrical Engineering (Part Time)	Modelling & Experimental Investigation of Photovoltaic-Thermal (PV/T) System	2024
17.	Rajesh Narayan Deo	Electrical Engineering (Part Time)	Design , Simulation and Implementation of Various Power Factor Corrected (PFC) topologies based LED Drivers	2024

No of Ph.d students thesis Submitted : 01

1.	Matta Mani Sankar	Electrical Engineering (Part Time)	Optimal Location of Distributed Generators in Power System	November 2024

No of Ph.d students thesis ongoing : **4 (3 Full Time & 1 Part Time)**

No of Post-graduate Students Guided : **30.**

Sl.No.	Name of Student	Course	Title of Thesis/Projects
1	Ms. Merry Sinha	M.E(Power System)	Artificial Neural Network Based Voltage Estimation of Transmission Networks

2	Ch. A. N. Prasad	M.E(Power System)	Self tuned Neural network and Fuzzy logic controller for AGC
3.	S.P.P. Rao	M.E(Power System)	Hybrid Fuzzy Neural Network Controller For Automatic Generation control.
4	V.S.N.V. Raj Kumar Grandhi	M.E(Control System)	Development of Hot-Dip Galvanization based Predictive Neural Network Model and Control using Adaptive Neuro Fuzzy Interface System(ANFIS)
5	Suman Kumar Ghosh	M.E(Control System)	Intelligent Controller for Load Frequency Control
6	Sagar Samaddar	M.E(Power System)	Microprocessor Based Speed Control of Series D.C. Motor
7	Srinivasa Rao Coppisetti	M.E(Power System)	Design of Integral Controller for Automatic Generation Control in Deregulated Environment
8.	Ellora Chakraborty	M.E(Power System)	Fuzzy Logic Based Automatic Generation Control In Traditional and Deregulated Environment
9.	Manimala	M.E(Power System)	Modelling and Control of Variable Speed Wind Turbine System
10.	Pritam Kumar Nirala	M.Tech (Power System)	Speed Control of Separately Excited DC motor
11	Vigya	M.E(Control System)	Modelling And Control Of Doubly Fed Induction Generator in Wind Turbine System
12.	Vivek Patel	M.Tech.(Power System)	Design and Analysis of Boiler-Turbine-Governor Controls using optimal control.
13.	Dilip Biswas	M.Tech.(Power System)	Maximum Power Point Tracking for Wind Energy System by Adaptive Neural Network based Fuzzy interface System.
14.	Kedar Paul	M.Tech.(Power System)	Multi State Reliability Analysis of a Wind Farm Using Markov Reward Model.
15.	Sumit Kumar Das	M.Tech (Power Electronics & Electrical Drives)	Modelling and Simulation of Grid Connected PV system.
16.	Md. Mazharul Haque	M.Tech (Power Electronics & Electrical Drives)	DSP based Implementation of a Z-Source Inverter

17.	Ravi Kumar	M.Tech.(Power System)	Modelling and Control of a Grid connected Wind-PV Hybrid Generation System
18.	Krishan Ranjan	M.Tech (Power Electronics & Electrical Drives)	Fault Ride Through Improvement of Doubly Fed Induction Generator
19.	Mansi Singh	M.Tech (Power Electronics & Electrical Drives)	Harmonic Suppression of DFIG Based Wind Energy Conversion System(WECS) using LCL-Filter
20.	Ashutosh Srivastava	M.Tech (Power Electronics & Electrical Drives)	Low voltage Ride Through Enhancement scheme for DFIG based Wind Energy Conversion System(WECS)
21	Shivundu Vats	M.Tech.(Power System)	Performance of Demagnetization Control in DFIG System under Transient Condition of Three Phase Voltage Dip
22	Bhavesh Kumar Patil	M.Tech.(Power System)	Implementation of Fuzzy Logic Controller in Multiple Sources Two area Power System Network
23	Mr. Shahnawz Alam	M.Tech (Power Electronics & Electrical Drives	Development of Control Strategy for the Fault-ride through (FFRT) capability of DFIG based Wind Energy Conversion System
24	Sumit Kumar Keshri	M.Tech.(Power System)	Low Voltage Ride Through Capability of DFIG based Wind Energy Conversion System Using Capacitor based Non-Superconducting FCL
25.	Dishant Bhagdev	M.Tech.(Power System)	Study and Application of MPC for AGC of two area interconnected Hybrid system supported by SMES based ESS
26.	Vishal	Dr. Kalyan Chatterjee	Power Quality Enhancement of DFIG based wind turbine by active filter Implementation

No of under-graduate Students guided: 65

Membership of Scientific and Professional Societies:

S.No.	Name of Professional body	Membership no. with validity
1.	IE India	Fellow

2.	Member ISTE (India)	LM 29202
3.	IEEE Member	91197717 upto 31st December 2025
4.	System Society of , India	LM-24032

Details of significant outreach activities:

Activities	Year
Inverted Talk as a resource person in the Department of EEE, BIT Mesra off-campus on 22th March, 2017 .Topic: Mathematical Modelling of complete wind system including DFIG and associated controllers.	22.3.2017
Attending as an expert on a short term course " Renewable Energy and Grid Integration "and deliver a lecture on 9th April, 2018 at VSSUT, Burla	9.4.2018
Delivering an Expert lecture in FDP on " Advancement and Application of Soft Computing in Electrical System (AASCES)	16.7.2018
Conducting interactive session to faculty and Ph. D scholars in YCCE Nagpur	19.12.2018
Plenary talk of IEEE international Conference ICEFEET-2020 at NIT, Patna	10.7.2020
Inverted Talk as a resource person on Technical session in AICTE sponsored six day online Short Term Training Programme (STTP) in the Department of EEE, Saranathan College of Engineering on 18th July 2020) Topic on **"Fault ride-through capability of WECS**	18.7.2020
Inverted Talk as a resource person on Technical session in AICTE sponsored two week online Short Term Training Programme (STTP) in the Department of EEE, Chaitanyatems Bhrathi Institute of Technology on 25th December , 2020 Topic on **" Hybrid Intelligent Systems Neural Expert Systems and Neuro Fuzzy Systems"**	25.12.2020
Plenary talk of International Conference on Innovative Development in Engineering Applications (IDEA 2021)	9.2.2021
An expert talk in National Workshop on "Recent Advances in Smart Grid and Renewable Energy Integration" from 07th – 11th March 2022	8.2.2022
Expert lecturer in the STC on "Artificial Intelligence and Data Science" conducted by IIIT Bhagalpur during 03/05/2022 to 07/05/2022	6.5.2022
Expert lecture in the Faculty Development Program on "Next-generation Applications in Electrical and Electronics Engineering" from 15th September to 20th September, under the banner of Electronics and ICT Academy, NIT Patna	16.9.2022
Expert lecture in a five days online workshop on Recent Trends in Microgrid, during 27th September 2022 to 01st October 2022, NIT Uttarakhand	27.9.2022
Expert lecture in the Faculty Development Program on "Artificial Intelligence and Machine Learning in Healthcare and Agriculture" organised by the Department of Computer Science & Engineering, IIIT Bhagalpur from 12th – 23rd December, 2022.	23.12.2022
Expert lecture in the Faculty Development Program on "Advances in Renewable Energy and Electrical Vehicles" organised by the Department of Electrical Engineering, Mizoram University from 13th – 17th March, 2023.	15.3.2023

No. of Conferences/Seminars/Symposia/Workshops attended

Sl.no.	Name of Conferences/Seminars	Date	Venue
1.	Applied Systems Engineering and Soft Computing	March 4-5,2000	Dayalbagh Educational Institute, Agra
2.	Matlab India Millennium Conference	Nov 15-17,2000	Bangalore
3.	Computer Applications in Electrical Engineering Recent Advances	Feb 21-23,2002	IIT ,Department of Electrical Engineering, Roorkee
4.	National conference of Power 2002	March,2002.	Jharkhand, IE(I),
5.	National conference of Power 2002	Nov.1-2,2002	B.I.T,Mesra
6.	12th National Power System Conference	Dec. 27-29,2002	IIT ,Department of Electrical Engineering, Khargpur
7.	27th National System Conference	Dec 17-19,2003	IIT ,Department of Electrical Engineering, Kharagpur
8.	Power System –Challenges to Electric Utilities in the New Millennium	Nov. 3-5th ,2004.	Kathmandu, Nepal
9.	Emerging Trend in Power Sector	Aug.5-6th,Aug,2006	B.I.T,Mesra
10.	International Conference in Power System	March 29th -31St ,2011	Bangkok, Thailand
11.	Asia –Pacific Power and Energy Engineering Conference(APPEEC 2012)	March 27th -29th ,2012	Shanghai,China
12	19th National Training Course on “Wind Energy Technology”	14th to 18th March, 2016	National Institute of Wind Energy(MHRD), Chennai
13.	7TH IET International Conference on Renewable Power Generation	26th September to 27th September 2018	Denmark Technical University, Lyngby, Copenhagen, Denmark

Short Term Course Organised as a coordinator

Sl. No.	Title of Course	Funding Agency	Duration	Coordinators
1.	Professional Skill Development Program on "MATLAB & Simulink for Engineering Application"	Faculty member , Researcher and student from outside	22th June. -27th June.,2015	Dr. Kalyan Chatterjee
2.	Certificate Course on, "MATLAB & Simulink for Engineering Application"	Internal Faculty and Students	5th Dec., -10th Dec.,2014	Dr. Kalyan Chatterjee
3.	MATLAB BASED SOFT COMPUTING TECHNIQUES	Professional Skill Development Program	June 27th – 2nd July ,2014	Dr. Kalyan Chatterjee
4.	Certificate Course on, "MATLAB & Simulink for Engineering Application"	Certificate Course	26th Aug., -31st Aug.,2013	Dr. Kalyan Chatterjee
5.	Professional Skill Development Program on "MATLAB & Simulink for Engineering Application"	Faculty member , Researcher and student from outside	24th June. -29th June.,2013	Dr. Kalyan Chatterjee
6.	Certificate Course on "MATLAB & Simulink for Engineering Application"	Certificate Course	27th Aug., -1st Sep.,2012 & 17th Sep. -22nd Sep.,2012	Dr. Kalyan Chatterjee
7.	Mine Electrical Engineering for Executive Engineers	TATA STEEL, JAMADOBA	3rd Dec.,- 8th Dec, 2012	Prof . T.K.Chatterjee & Dr. Kalyan Chatterjee
8.	MATLAB BASED ELECTRICAL SYSTEM MODELLING AND REAL TIME CONTROL.	AICTE & ISTE.	6th Dec-18th Dec. , 2004	Dr T.Ghose & Dr. Kalyan Chatterjee
9.	"MATLAB In Engineering Application" .	RDCIS ,SAIL, Doranda	14th to 26th June,2004	Dr. B.M.Karan & Dr. Kalyan Chatterjee
10.	Two days training programme on	B.I.T,Mesra	21-22nd July,2004	Dr. Kalyan Chatterjee

Handling of projects (as Principal Investigator/Coordinator):

Sl. No.	Title of Project	Funding Agency	Date of sanction	Status
1	Analysis Of Intelligent controller For Automatic Generation Control.	AICTE under research & Development	10.03.2003	Completed
2.	Real Time Implementation of Intelligent Controller for Load Frequency Control	DST, India	24.4.2007	Completed
3.	Development of a new control methodology to improve the Fault Ride Through capability of Doubly Fed Induction Generator (DFIG)	CSIR Extramural Research scheme	4.8.2016	Completed

Publications:

(a)Paper publications in International Journals (SCI/SCOPUS indexed journals only):

S.No.	Title of paper	Author(s)	Name of the Journal	Vol. & Year	Pages
1.	Multi-objective optimal allocation of renewable distributed generation units in a distribution network under high penetration of plug-in hybrid electric vehicles.	Sankar, M.M., Chatterjee, K.	Electrical Energy	2024	1-23z
2.	Study the impact of renewable and non-renewable energy sources on micro-grid using time series data based information.	Kumari Sandhya, Kalyan Chatterjee	Energy Reports	Volume 11, 2024	Pages 4957-4966,
3.	A posteriori multiobjective approach for techno-economic allocation of PV and BES units in a distribution system hosting	Matta Mani Sankar, Kalyan Chatterjee	Applied Energy,	Volume 351, 2023,	121851,
4.	A comprehensive review of photovoltaic-thermal (PVT) technology: Performance evaluation and contemporary development	Awaneendra Kumar Tiwari, Kalyan Chatterjee, Sanjay Agrawal,	Energy Reports, ,	Volume 10, 2023,	Pages 2655-2679

5.	. Renewable Energy-Based Multi-source System Under Deregulated Environment Using COKHA Algorithm', .	Biswas, S., Kumar Roy, P. and Chatterjee, K	, *IETE Journal of Research*,	69(7), 2021	4772–4790
6.	Two-stage ANN based intelligent technique for optimal positioning and sizing of DERs in distribution system	Kumari Sandhya, Kalyan Chatterjee	Engineering Applications of Artificial Intelligence	121,2023	105932
7.	Design of a maiden synthetic inertia controller using super-capacitor energy storages and electric vehicles and real-time validation of the performance of the controller	Rajasi Mandal, Kalyan Chatterjee	Journal of Energy storage(Q2)	Volume 55, Part B May 2021 November 22	105559
8.	Flicker Attenuation Using FACTS Device for DFIG-Based WECS Connected to Distribution Network	A. Mishra and K. Chatterjee	IEEE Systems Journal (Q1)	doi: 10.1109/JSYST.2022.3161469	
9.	Coordinated control of Incentive-Based Demand Response Program and BESS for frequency regulation in low inertia isolated grid,	Sandip Kumar Gupta, T. Ghose, Kalyan Chatterjee	Electric Power Systems Research (Q2)	Volume 209, 2022,	108037,
10.	Harmonic analysis and attenuation using LCL-filter in doubly fed induction generator based wind conversion system using real time simulation based OPAL-RT.	Anirban Mishra, Kalyan Chatterjee	Alexandria Engineering Journal(Q1)	Volume 61, Issue 5, 2022,	Pages 3773-3792
11.	. Hybrid CNN-LSTM deep learning model and ensemble technique for automatic detection of myocardial infarction using big ECG data.	Rai, H.M., Chatterjee, K	Applied Intelligence (Q2)	Vol:52, https://doi.org/10.1007/s10489-021-02696-6	5366–5384 (2022).
12.	System Simplification Using Pole Spectrum Analysis (PSA) with the Advantage of Dominant Pole Retention.	Sengar, R.S., Chatterjee, K. & Singh, J.	Circuits Syst Signal Process (Q3)	**Vol:41,** (2022). https://doi.org/10.1007/s00034-021-01792-9	102–121

13.	System Approximation via Restructured Hankel Matrix.	Sengar, R.S., Chatterjee, K. & Singh, J.	Circuits Syst Signal Process (Q3)	**Vol:40,** 2021 https://doi.org/10.1007/s00034-021-01745-2	6354–6370 (2021).
14.	Real-time implementation of ring based saturated core fault current limiter to improve fault ride through capability of DFIG system	Prashant Mani Tripathi, Kalyan Chatterjee	International Journal of Electrical Power & Energy Systems (Q2)	Volume 131, October 2021	107040
15.	Virtual inertia emulation and RoCoF control of a microgrid with high renewable power penetration	Rajasi Mandal, Kalyan Chatterjee	Electric Power Systems Research (Q2)	Volume 194, May 2021	107093
16.	Automatic and accurate abnormality detection from brain MR images using a novel hybrid UnetResNext-50 deep CNN model	Hari Mohan Rai, Kalyan Chatterjee, Sergey Dashkevich	Biomedical Signal Processing and Control (Q2)	Volume 66, April 2021	102477
17.	Disturbance rejection of the powers and DC-link voltage of a doubly-fed induction generator using state-space based linear quadratic integral	Ravi Bhushan, Dipesh Kumar and **Kalyan Chatterjee**	Int Trans Electr Energ Syst. (**SCIE: I.F: 1.692). Q3**	Volume -31 May, 2021	Issue 5, e12865
18.	Optimal coordination between PV smart inverters and different demand response programs for voltage regulation in distribution system	Sandip Gupta ,Tirthadip Ghose and Kalyan Chatterjee	Int Trans Electr Energ Syst. (**SCIE: I.F: 1.692). Q3**	Volume -31 March, 2021	Issue 3, e12765
19.	A review on the state of the art of proliferating abilities of distributed generation deployment for achieving resilient distribution system	K. Sandhya,K. Chatterjee	Journal of Cleaner Production (Q1)	Volume 287, 10 March 2021, 125023	
20.	Detection of brain abnormality by a novel Lu-Net deep neural CNN model from MR images	HM Rai, K Chatterjee	Machine Learning with Applications	Volume 2, 15 December 2020, 100004	

21.	PN Inference Based Autonomous Sequential Restoration of Distribution System Under Natural Disaster	K. Sandhya, T. Ghose, D. Kumar and K. Chatterjee	*IEEE Systems Journal* **(SCIE I.F:3.987, Q1**)	Early access 2020 doi: 10.1109/JSYST.2020.2994585.	
22.	Frequency control and sensitivity analysis of an isolated microgrid incorporating fuel cell and diverse distributed energy sources	Rajasi Mandal, Kalyan Chatterjee	International Journal of Hydrogen Energy (**SCIE: I.F: 4.939 Q2)**	Volume 45 issue 23 2020	Page : 13009-13024
23.	Effectiveness evaluation of passive resistive element placement on a fault ride through enhancement in a DFIG based wind energy conversion system	Subhendu Sekhar Sahoo, Prashant Mani Tripathi, Kalyan Chatterjee	Wind Energy (**SCIE: I.F: 3.646 Q2)**	Volume 23 issue 3 2020	Pp: 825-848
24.	Analysis and enhancement of small-signal stability on DFIG-based wind integrated power system through the optimal design of linear quadratic regulator	Dipesh Kumar, Kalyan Chatterjee	IET Renewable Power Generation (**SCIE: I.F: 3.894 Q1)**	Volume 14, issue-4; 2020	Pp:628-639
25.	Development of improved direct current based saturated core fault current limiter in DFIG system for enhancing the low voltage ride-through capability	Prashant Mani Tripathi, Kalyan Chatterjee	IET Generation, Transmission & Distribution (**SCIE: I.F: 2.862 Q2)**	Volume 14, issue 1; 2019	Pg:148-156
26.	Enhancing the fault ride through capability of DFIG-based wind energy system using saturated core fault current limiter	P.M.Tripathi , Subhendu Sekhar Sahoo and **Kalyan Chatterjee**	The Journal of Engineering (IET) **(ESCI)**	Vol. 2019 Iss. 1 Year : 2019	pp. 4916-4921
27.	A coordinated control strategy using supercapacitor energy storage and series dynamic resistor for enhancement of fault ride-through of doubly fed induction generator	Subhendu Sekhar Sahoo, Kalyan Chatterjee, PM Tripathi	International Journal of Green Energy(Taylor & Francis) **(SCIE: I.F: 1.388) Q4**	Volume:16, Issue:8 Year 2019	PP: 615-626

28.	Low-cost Non-superconducting DC-fault Current Limiter for the Enhancement of Low-voltage Ride Through Capability of Doubly Fed Induction Generator	Subhendu Sekhar Sahoo, P. M. Tripathi & Kalyan Chatterjee	IETE Technical Review SCI)) **(SCIE: I.F: 1.845) Q3**	Published online: 05 Aug 2019 DOI: 10.1080/02564602.2019.1647803	
29.	Hybrid Adaptive Algorithm based on Wavelet Transform and Independent Component Analysis for Denoising of MRI Images	HM Rai, **K Chatterjee**	Measurement (Elsevier) (**SCIE: I.F: 3.364). Q1**	Volume 144, October 2019,	Pages 72-82
30.	Enhancement of Low Voltage Ride Through of Wind Energy Conversion System using Superconducting Saturated Core Fault Current Limiter	P.M.Tripathi , Subhendu Sekhar Sahoo and **Kalyan Chatterjee**	Int Trans Electr Energ Syst. **(SCIE: I.F: 1.692). Q3**	Volume -29 April, 2019	Issue 4
31.	Fruit fly algorithm-based automatic generation control of multiarea interconnected power system with FACTS and AC/DC links in deregulated power environment	Shankar R, Kumar A, Raj U, **Chatterjee K**	Int Trans Electr Energ Syst. 2018; e2690 **(SCIE: I.F: 1.692). Q3**	Volume -29, January 2019	Issue 1
32.	A unique Feature Extraction using MRDWT for Automatic Classification of Abnormal Heartbeat from ECG Big Data with Multilayered Probabilistic Neural Network Classifier	HM Rai, **K Chatterjee**	Applied Soft Computing(Elsevier **(SCIE: I.F: 5.472) Q1**	Volume 72, 2018	Pages:596-608
33.	A review of harmonic elimination techniques in grid connected doubly fed induction generator based wind energy system	Anirban Mishra, P.M. Tripathi, **Kalyan Chatterjee**	International Journal of Renewable & Sustainable Energy Reviews(Elsevier) **(SCIE: I.F: 12.11)Q1**	Volume 89, June 2018	Pages 1-15
34.	Improving the dynamic response of frequency and power in a wind integrated power system by optimal design of compensated superconducting magnetic energy storage	Dipesh Kumar, Ravi Bhushan, **Kalyan Chatterjee**	International Journal of Green Energy(Taylor & Francis) **(SCIE: I.F: 1.388) Q4**	Volume 15, Issue 3, February 2018	pages: 208-221,
35.	Availability estimation of a multi-state wind farm in fuzzy environment	Asish Roy, **Kalyan Chatterjee**,	International Journal of Green Energy(Taylor & Francis) **(SCIE: I.F: 1.388) Q4**	Volume 15 ,Issue 2, January 2018	pages: 80-95

36.	Reliability analysis of a multi-state wind farm using Markov process",	Asish Roy, **Kalyan Chatterjee**	Safety and Reliability (Taylor & Francis),(ESCI)	Volume 37, Issue 1, 2018	Pages: 3-24 ,
37.	Two degree of freedom internal model control-PID design for LFC of power systems via logarithmic approximations",	Jay Singh, **K.Chatterjee,** C . B. Vishwakarama	ISA Transactions (Elsevier) **(SCIE: I.F: 4.305) Q1**	Volume 72 January 2018	Pages 185-196
38.	Mathematical modeling and control of DFIG-based wind energy system by using optimized linear quadratic regulator weight matrices	Ravi Bhushan, **Kalyan Chatterjee**	International Transactions on Electrical Energy Systems (Wiely) (**SCIE: I.F: 1.692). Q3**	Volume 27, Issue 11, November 2017	
39.	A comprehensive state of the art literature survey on LFC mechanism for power system	Ravi Shankar, SR Pradhan, **Kalyan Chatterjee**, Rajasi Mandal	International Journal of Renewable & Sustainable Energy Reviews (Elsevier) **(SCIE: I.F: 12.11)Q1**	Volume 76 September 2017	Pages 1185-1207
40.	"Effects of parameter variation in DFIG-based grid connected system with a FACTS device for small-signal stability analysis".	Ravi Bhushan, **Kalyan Chatterjee**	IET Generation, Transmission & Distribution(**SCIE: I.F: 2.862 Q2)**	Volume 11, Issue 11 ,August 2017	Pages 1185-1207
41.	Design and analysis of artificial bee-colony-based MPPT algorithm for DFIG-based wind energy conversion systems	Dipesh Kumar, **Kalyan Chatterjee**.	International Journal of Green Energy(Taylor & Francis) **(SCIE: I.F: 1.388) Q4**	Volume 14 Issue 4, November 2016	Pages 416–429
42.	Impact of energy storage system on load frequency control for diverse sources of interconnected power system in deregulated power environment	Ravi Shankar, **Kalyan Chatterjee** & Ravi Bhushan	Electrical Power and Energy Systems(Elsevier), **SCIE: I.F:3.588)Q1**	Volume 79 , July 2016	Pages 11–26
43.	A Review of Conventional and Advanced MPPT Algorithms for Wind Energy Systems	Dipesh Kumar, **Kalyan Chatterjee**,	Renewable & Sustainable Energy Reviews(Elsevier), **(SCIE: I.F: 12.11)Q1**	Volume 55 March, 2016	Pages 957-970

44.	Biased reduction method by combining improved modified pole clustering and improved Pade approximations	Jay Singh, C.B. Vishwakarama, **K.Chatterjee**	Applied Mathematical Modelling(Elsevier) **(SCIE: I.F:3.633) Q1**	Volume 40 Issue 2	Pages 1418–1426
45.	Small-Signal Stability Analysis for Two-area Interconnected Power System with Load Frequency Controller in coordination with FACTS and Energy Storage device	Ravi Shankar, **Kalyan Chatterjee** & Ravi Bhushan,	Ain Shams Engineering Journal(Elsevier) **(SCIE: I.F:1.949) Q2**	Volume 7, issue 2 June, 2016	Pages 603–612
46.	Fuzzy Logic Based Controller for a Grid-Connected Solid Oxide Fuel Cell Power Plant"	**Kalyan Chatterjee**, Ravi Shankar, & Amit Kumar	Transactions of the ASME, Journal of Fuel cell science and Technology**(SCIE)** Q3	Vol.11 October 2014	
47.	Performance Analysis of Maximum Power Point Tracking Algorithms Under Varying Irradiation	Bhukya Krishna Naick; Tarun Kumar Chatterjee, **Kalyan Chatterjee**,	Int. Journal of Renewable Energy Development(ESCI)	6 (1) 2017:	65-74
48.	Reduced Order Modelling for Linear Dynamic Systems," *Series: Advances C;*	Jay Singh, **Kalyan Chatterjee**, C.B. Vishwakarma,	*AMSE JOURNALS*, ***(ESCI)***	*Vol. 70; No 1, 2015*	*pp 71-85*
49.	Coordination of Economic Load Dispatch and Load Frequency Control for Interconnected Power System", Ser. B	Ravi Shankar, **Kalyan Chatterjee** & T.K. Chatterjee,	J. Inst. Eng. India*(Scopus))*	DOI 10.1007/s40031-014-0113-0.(Scopus)	
50.	"System Reduction by Eigen Permutation Algorithm and Improved Pade Approximations"	Jay Singh, **Kalyan Chatterjee**, C. B. Vishwakarma,	International Journal of Mathematical, Computational Science and Engineering.(Scopus	Vol:8 No:1, 2014,	PP-117-121)
51.	"A Control Strategy for Load Frequency Control Coordinating Economic Load Dispatch & Load Forecasting Via Kalman Filter", -	Ravi Shankar, Kalyan Chatterjee & T.K. Chattrejee,	International Journal on Electrical Engineering and Informatics(Scopus)	Volume 4, Number 3, October 2012	

52.	"Effect of Battery Energy Storage System on Load Frequency Control under Deregulation" Article(Scopus)	**Kalyan Chatterjee**	International Journal of Emerging Electric Power Systems(ESCI & Scopus))	Vol. 12 : Iss. 3,2011,	
53.	Design of Dual Mode PI Controller for Load Frequency Control,"	**Kalyan Chatterjee**	International Journal of Emerging Electric Power Systems(ESCI & Scopus))	Vol. 11 : Iss. 4, 2010, Article 3.(Scopus)	
54.	"PI Controller for Automatic Generation Control Based on Performance Indices),	**Kalyan Chatterjee**	Int. J. of Electrical and Computer Engineering *(Scopus))*	Vol.5,No. 3,2011(March	pp. 490-497.(Scopus)

(b) Paper Publications in Conference (SCI/SCOPUS/Web of Science/Internationally renowned Conference)

S.No.	Title of paper	Co-author(s), if any	Name of the Conference	Date
1.	Load frequency control of a single area hybrid power system by using integral and LQR based integral controllers	R Mandal, K Chatterjee, BK Patil	20th National Power Systems Conference ,2018	14-16 Dec. 2018
2.	Droop Based Dynamic Demand Response Controller for HVAC Load	Sandip Kr. Gupta, T Ghose, Kalyan Chatterjee	20th National Power Systems Conference ,2018	14-16 Dec. 2018
3.	State Estimation for DG penetrated Adaptive Distribution System during Disaster	Kumari Sandhya, Kalyan Chatterjee, T Ghose	20th National Power Systems Conference ,2018	14-16 Dec. 2018
4.	Low voltage ride through enhancement of DFIG based WECS using flux control	Shivundu Vats, Subhendu Sekhar Sahoo, PM Tripathi, Kalyan Chatterjee	4th International Conference on Recent Advances in Information Technology (RAIT) 2018	15-17 March 2018

5.	Maximum power point tracking for wind energy system by adaptive neural-network based fuzzy inference system	Dilip Biswas, Subhendu Sekhar Sahoo, PM Tripathi, Kalyan Chatterjee	4th International Conference on Recent Advances in Information Technology (RAIT) 2018	15-17 March 2018
6.	Power and Frequency Control of a Wind Energy Power System using Artificial Bee Colony Algorithm	Dipesh Kumar, Anirban Mishra, Kalyan Chatterjee	2017 Third International Conference on Science Technology Engineering & Management (ICONSTEM)	23-24 March 2017
7.	A Reliability Assessment Model of a Wind Farm for Generation Adequacy Studies of Wind Integrated Power System	Asish Roy, Subhendu Sekhar Sahoo, Kalyan Chatterjee	2017 Third International Conference on Science Technology Engineering & Management (ICONSTEM)	23-24 March 2017
8.	Fault ride-through enhancement of wind energy conversion system adopting a mechanical controller	Subhendu Sekhar Sahoo, Asish Roy, Kalyan Chatterjee	2016 National Power Systems Conference (NPSC)	19-21 Dec. 2016
9.	Modeling and investigation of small-signal stability of dfig-based wind energy system using linear quadratic integral controller	Ravi Bhushan, Kalyan Chatterjee	2016 National Power Systems Conference (NPSC)	19-21 Dec. 2016
10.	Artificial bee colony based MPPT algorithm for wind energy conversion system	Dipesh Kumar, **Kalyan Chatterjee**	IEEE 6th International Conference on Power Systems (ICPS page 1-6, **DOI:** 10.1109/ICPES.2016.7584157 (SCI)	4-6 March, 2016,
11.	"Designing an optimized pitch controller of DFIG system using frequency response curve"	**Kalyan Chatterjee**, Ravi Bhushan, Minimala	, IEEE 6th International Conference on Power Systems (ICPS), **DOI:** 10.1109/ICPES.2016.7584060	4-6 March, 2016,
12.	"Comparison between GA-based LQR and conventional LQR control method of DFIG wind energy system",	Ravi Bhushan, **Kalyan Chatterjee**, Ravi Shankar,	3rd International Conference on Recent Advances in Information Technology (RAIT), -219, **DOI:** 10.1109/RAIT.2016.7507904	3-5 March 2016, Page:214

13.	GA based improved frequency regulation characteristics for thermal-hydro-gas & DFIG model in coordination with FACTS and energy storage system",	Ravi Shankar, SR Pradhan, SB Sahoo, Kalyan Chatterjee,	IEEE "3rd International Conference on Recent Advances in Information Technology (RAIT), Page:220-225, D**OI:** 10.1109/RAIT.2016.7507905	3-5 March 2016,
14.	"Load frequency control for internconnected power system in-coordination with SSSC and RFB through AC/DC link",	Ravi Shankar, MK Babu, Ravi Bhushan, **Kalyan Chatterjee**	Power, Communication and Information Technology Conference (PCITC), Bhubaneswar,India 2015 IEEE, **DOI:** 10.1109/PCITC.2015.7438174.	15-17 Oct.,2015
15.	"SMES Coordinated with SSSC of an Interconnected Thermal System for Load Frequency Control."	**K.Chatterjee**, Ravi Sankar T.K.Chatterjee,	IEEE sponsored Asia –Pacific Power and Energy Engineering Conference(APPEEC 2012) during at Shanghai, China	27th to 29th March, 2012
16.	"Genetic Algorithm Based Controller for Load-Frequency Control of Interconnected System"	Ravi Sankar, **K.Chatterjee**, T.K.Chatterjee	IEEE sponsored international conference Recent Advances in Information Technology(RAIT 2012) during at ISM, Dhanbad, India.	15th to17 th March, 2012
17.	"PI Controller for Automatic Generation Control Based on Performance Indices",	**K.Chatterjee**	international conference of Power System(ICPS 2011) during at Bangkok, Thailand	29th to 31 th March, 2011

Books/Monographs/Book chapters written:

S.No.	Name of book/monograph/ Book chapters	Name of Co-author(s), if any	Year of Publication	Publisher with address
1.	Systems Thinking Approach for Social Problems Chapter 7: Load Frequency control considering very short term load prediction and Economic load dispatch using Neural Network and its application	Ravi Shankar, K Chatterjee& T.K. Chatterjee	2015	Springer India Lecture Notes in Electrical Engineering 327

2.	Handbook of Renewable Energy Technology and Systems Chapter 2: Study of Mathematical Modeling and Small-Signal Stability of a Wind-Driven DFIG-Based System UsingDifferent Types of Control Approach	Ravi Bhushan & K Chatterjee	2022	World Scientific Publishing Co., UK
3.	Fault ride through/low voltage ride through capability of doubly fed induction generator–based wind energy conversion system: a comprehensive review	Prashant Mani Tripathi, Anirban Mishra, Kalyan Chatterjee	, 2024,	Modeling and Control Dynamics in Microgrid Systems with Renewable Energy Resources, Academic Press,

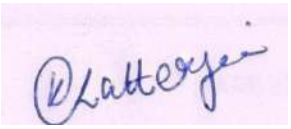
Patent

Patent no: 202531004108 dated 17th January 2025 "Compact Three-Phase Saturated Core Fault Current Limiter (SCFCL) for Grid-Connected DFIG Systems" , Kalyan Chatterjee and Prashant Mani Tripathi filing to Indian Patent Office.

Other Responsibilities:

S.No.	Section/office/ Institute level committee	From	To	Position held	Responsibilities
1.	IIT(ISM) Dhanbad	9.9.2024	Till now	Chairman of PG-Phd Admission Committee	Rule & Regulation and total admission procedure of Ph.d. M.Tech, MBA admission of the Institute
2.	IIT(ISM) Dhanbad	9.9.2023	8.9.2024	Vice Chairman of PG-Phd Admission Committee	Rule & Regulation and total admission procedure of Ph.d. M.Tech, MBA admission of the Institute
3.	Department of Electrical Engineering, IIT(ISM) Dhanbad	24.12.218	2.1.2023	Head of the Department	Chairman of DPGC, DUGC, Chairman of Department Purchase committee, Departmental policy

4.	IIT(ISM) Dhanbad	21.9.2017	26.1.2020	Chairman of JRF Admission Committee	Rule & Regulation and total admission procedure of research Scholar admission of the Institute
5.	IIT(ISM) Dhanbad	5.7.2018	25.3.2019	Associate Dean – R &D(Industrial Consultancy)	Rule & Regulation formation for Institute Industrial Consultancy
6.	IIT(ISM) Dhanbad	November , 2011	September, 2017	Member of JRF Admission Committee	Research Scholar admission of Institute
7.	IIT(ISM) Dhanbad	March 2012	7.8.2018	President of Cyber Society	Monitoring the Cyber society student club activities
8.	IIT(ISM) Dhanbad	March 2006 to	June 2008	Hostel Warden	Hostel Warden for Topaz Hostel
9.	IIT(ISM) Dhanbad	7.12.2011	2016	Member of Monitoring Committee of Building	Monitoring of new construction
10.	IIT(ISM) Dhanbad	2016	2018	Member of Electrical Maintenance Committee Member	The electrical maintenance work
11.	IIT(ISM) Dhanbad	2022	Jan, 2023	Member of Internal Works Committee	Technical sanction for building, other capital works and renovation works
12.	IIT(ISM) Dhanbad	2022	Till Now	Member of Building Works Committee	Progress work for building construction new bulding , renovation works



Date:7.2.25

Signature
(Kalyan Chatterjee)