Mairaj ud-Din Mufti

E-mail:1. mdmufti@nitsri.ac.in,
2. muftimd@yahoo.com
Phone: 0194-2422032
Extension: 2604

Professor, Department of
Electrical Engineering, NIT Srinagar
Jammu and Kashmir, India

EDUCATION

Degree	Institute	Specialization	Year of Completion
PhD	Indian Institute of Technology, Delhi	Power system control	1998
M.TECH	Indian Institute of Technology, Delhi	Control Engineering and Instrumentation	1991
B.E	National Institute of Technology, Srinagar (Formerly REC Srinagar)	Electrical Engineering	1986

ACADEMIC EMPLOYMENT

S. No.	Positions held	Name of the Institute	Time period
01	Dean Research and Development	National Institute of Technology Srinagar	2008-2012
02	Head-Department of Electrical Engineering	National Institute of Technology Srinagar	2009-2012
03	Dean Academic Affairs	National Institute of Technology Srinagar	2012-2015

PUBLICATIONS

Publications in SCI indexed Journals.

S.No	Author(s)	Title	Name of the Journal	Year
01	Faizan Hassan Hajam **Mairaj Ud Din Mufti**	An intelligent two-level control of Ultrabattery for improved automatic generation control of a multi-source deregulated power system.	International Journal of Energy Research	2021
02	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Comprehensive Power System Stability Improvement with ROCOF Controlled SMES.	Electric Power Components and Systems	2020
03	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Systematic development and application of a fuzzy logic equipped generic energy storage system for dynamic stability reinforcement.	International Journal of Energy Research	2020.
04	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Sweeping power system stabilisation with a parametric fuzzy predictive control of a generalised energy storage device	IET Generation, Transmission & Distribution	2020
05	Mubashar yaqoob Zargar, **Mairaj Ud Din Mufti**, Shameem Ahmad Lone	Dynamic performance improvement of isolated power system using intelligently controlled SMES	IET Generation Transmission & Distribution	2020
06	Mubashar yaqoob Zargar, **Mairaj Ud Din Mufti**, Shameem Ahmad Lone	Adaptive Predictive Control of a small capacity SMES unit for improved Frequency Control of a Wind-Diesel Power System	IET Renewable Power Generation	2017
07	**Mairaj Ud Din Mufti,** Sheikh Javed Iqbal, Shameem Ahmad Lone, Qurat-Ul Ain	Supervisory Adaptive Predictive Control Scheme for Supercapacitor Energy Storage System	IEEE Systems Journal	2014
08	**Mairaj Ud Din Mufti**, Shameem Ahmad Lone, Shiekh Javed Iqbal, Mudasir Ismail	Super-capacitor based energy storage system for improved load frequency control	Electric Power Systems Research	2009

09	**Mairaj Ud Din Mufti,** Shameem Ahmad Lone	Improved load frequency control with superconducting magnetic energy storage in interconnected power systems	IEEJ Transactions on Electrical and Electronic Engineering	2007
10	**Mairaj Ud Din Mufti,** Shameem Ahmad Lone	Power quality improvement of a stand-alone power system subjected to various disturbances	Journal of Power Sources	2006
11	**Mairaj Ud Din Mufti,** R.Balasubramanian**,** SC.Tripathy	Dynamic performance assessment of an isolated wind–diesel power system with superconducting magnetic energy storage unit under turbulent wind and load disturbance	International Journal of Energy Research	2002
12	**Mairaj Ud Din Mufti,** R.Balasubramanian**,** S.C. Tripathy	Simultaneous frequency and voltage control of wind–diesel power system using energy storage	International Journal of Energy Research	1998

Publications in other peer reviewed journals

S.No	Author's Name	Title	Publisher	Year
01	Manzoor, Saira; Bakhsh, Farhad Ilahi & **Mairaj Ud Din Mufti**	Coordinated control of VFT and fuzzy based FESS for frequency stabilisation of wind penetrated multi-area power system	Wind Engineering	2021
02	Asima Syed**, Mairaj Ud Din Mufti**	Constrained neural adaptive predictive control of SMES for dynamic performance improvement of power systems	Wind Engineering	2021
03	Manzoor, Saira; **Mairaj Ud Din Mufti** & Bakhsh, Farhad Ilahi.	Application of VFT coordinated with fuzzy based SCESS for load frequency control. (*In-press)*	International Journal of Power and Energy Systems	2021
04	Asima Syed, **Mairaj Ud Din Mufti**	Prediction-based adaptive control of SMES for multi-area power systems	International Journal of Power and Energy Systems	2021
05	Abdul Waheed, **Mairaj Ud Din Mufti**, Mubashar yaqoob Zargar	Distributed Virtual Synchronous Generator approach versus Singular Virtual Synchronous Generator	Wind Engineering	2020

		approach: A dynamic stability evaluation		
06	Abdul Waheed, **Mairaj Ud Din Mufti**, Mubashar yaqoob Zargar	Dynamic performance enhancement of wind penetrated power system using SMES as virtual synchronous generator	International Journal of Power and Energy Systems	2020
07	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Distributed storage approach versus singular storage approach:A dynamic stability evaluation.	International Journal of Power and energy Systems	2020
08	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Constrained discrete predictively controlled distributed energy storage evaluation in a multi bus system	International Journal of Power and Energy Systems	2020
09	Saira Manzoor, **Mairaj Ud Din Mufti**	Genetically tuned fuzzy controlled flywheel powered micro-grid for improved frequency control	Wind Engineering	2020
10	Insha Muzaffer, Sabah Un Nisa, **Mairaj Ud Din Mufti**	Modelling and simulation of a multi-machine power system incorporating power system stabilisers and static VAR compensators for transient stability enhancement	International Journal of Industrial Electronics and Drives	2020
11	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Modelling and stability investigations of an aggregate wind farm-fed multi- machine system	Wind Engineering	2019
12	**Mairaj Ud Din Mufti**, Sabah Un Nisa	Constrained discrete mode control of supercapacitor energy storage system for improved AGC of a multi-area power system with effects of wind power.	International Journal of Power Electronics	2019
13	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Distributed storage approach versus singular storage approach:A dynamic stability evaluation	International Journal of Power and Energy Systems	2019
14	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Dynamic performance improvement of a hybrid multimachine system using a flywheel energy storage system	Wind Engineering	2019
15	Aaqib Ali Abass **Mairaj Ud Din Mufti**	SimPower-based analysis and design of a hybrid wind–diesel-superconducting magnetic energy storage system for simultaneous frequency and voltage control	Wind Engineering	2019
16	Hailiya Ahsan, **Mairaj Ud Din Mufti**	Discrete predictive control of a flywheel energy storage for transient stability augmentation	International Journal of Power	2019

			and Energy Systems	
17	Zahid Dar, **Mairaj Ud Din Mufti**	Integrating a superconducting magnetic energy storage system for intelligent control of LFC characteristic in multi-area power system	International Journal of Industrial Electronics and Drives	2018
18	Asima Syed, **Mairaj Ud Din Mufti**	Automatic generation control of a wind embedded two-area power system, interconnected through AC/DC transmission system	International Journal of Industrial Electronics and Drives	2018
19	Adil Mohiudin, **Mairaj Ud Din Mufti**	Transient stability enhancement of a multi-machine electric power system using an adaptive-predictive wide-area damping controller	International Journal of Industrial Electronics and Drives	2018
20	Saira Manzoor, **Mairaj Ud Din Mufti**	Improved frequency control of a micro-grid with a genetically tuned fuzzy controlled super-capacitor system	International Journal of Industrial Electronics and Drives	2018
21	**Mairaj Ud Din Mufti**, Asima Syed	Automatic generation control of a wind embedded two-area power system, interconnected through AC/DC transmission system	International Journal of Industrial Electronics and Drives	2018
22	Zahid Dar, **Mairaj Ud Din Mufti**	Integrating a superconducting magnetic energy storage system for intelligent control of LFC characteristic in multi-area power system	International Journal of Industrial Electronics and Drives	2018
23	Zahid Dar, **Mairaj Ud Din Mufti**	Improved load frequency characteristics with genetically tuned supercapacitor energy storage in interconnected power system	International Journal of Industrial Electronics and Drives	2018
24	Mubashar yaqoob Zargar, **Mairaj Ud Din Mufti**, Shameem Ahmad Lone	Modelling and performance assessment of a standalone hybrid wind-diesel-superconducting magnetic energy storage system using four-quadrant operation of superconducting magnetic energy storage	Wind Engineering	2017
25	Mubashar yaqoob Zargar, **Mairaj Ud Din Mufti**, Shameem Ahmad Lone	MATLAB/Simulink-based modelling and performance assessment of wind–diesel energy storage system	Wind Engineering	2017

26	Zahid Dar, **Mairaj Ud Din Mufti**	Enhanced load frequency control response with integration of supervisory controlled superconducting magnetic energy storage system in wind-penetrated two-area power system	Wind Engineering	2017
27	S.J. Iqbal, **Mairaj Ud Din Mufti**, Shameem Ahmad Lone, I. Mushtaq	Intelligently controlled superconducting magnetic energy storage forimproved load frequency control	International Journal of Power and Energy Systems	2009
28	Shameem Ahmad Lone**, Mairaj Ud Din Mufti**, Shiekh Javed Iqbal	Incorporation of a Redox Flow Battery in a Wind-Diesel Power System for Simultaneous Frequency and Voltage Control	Wind Engineering	2008
29	Shameem Ahmad Lone, **Mairaj Ud Din Mufti**	Modelling and Simulation of a Stand-Alone Hybrid Power Generation System Incorporating Redox Flow Battery Storage System	International Journal of Modelling and Simulation	2008
30	Shameem Ahmad Lone**, Mairaj Ud Din Mufti**	Redox Flow Batteries: Modelled for Power Quality Improvements in Autonomous Wind-Diesel Power Systems	Wind Engineering	2004
31	**Mairaj Ud Din Mufti**, R.Balasubramanian, Shameem Ahmad Lone, S. C. Tripathy	Modelling the Control of an Isolated Power System Based on Diesel and Pitch Controlled Wind Generation	Wind Engineering	2004
32	**Mairaj Ud Din Mufti**, R.Balasubramanian, Shameem Ahmad Lone, S. C. Tripathy	Modelling and control of weak power systems supplied from diesel and wind	International Journal of Power and Energy Systems	2003

Publications in conferences

S.No.	Authors	Title	Conference	Year
1	Hailiya Ahsan **Mairaj Ud Din Mufti**	Modeling and Control of a Generalized Energy Storage Device for Stabilizing Frequency and Voltage Oscillations.	2019 9th International Conference on Power and Energy Systems (ICPES)	2019
2	Hailiya Ahsan **Mairaj Ud Din Mufti**	Modeling and simulation of a superconducting magnetic energy storage based multi-machine power system for transient stability study.	2017 6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA)	2017
3	Insha Muzaffar, **Mairaj Ud Din Mufti**	Modeling of a multi-machine system aided with power system stabilizers and shunt compensator for transient stability enhancement.	2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS)	2017
4	Hailiya Ahsan **Mairaj Ud Din Mufti** Zainal Salam Shameem Ahmad Lone	Modeling and simulation of an energy storage based multi-machine power system for transient stability study.	2017 IEEE Conference on Energy Conversion (CENCON)	2017
5	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Model predictive control of two area power system with superconducting magnetic energy storage system.	2017 International Conference on Computing, Communication and Automation (ICCCA)	2017
6	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Analysis of two area power system with battery energy storage.	2017 2nd International Conference for Convergence in Technology (I2CT)	2017
7	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Load frequency control in a two-area power system with supercapacitor energy storage system.	2017 International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT)	2017
8	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Effect of ultra-battery on load frequency response of two area power system.	2017 International Conference on Computing, Communication and Automation (ICCCA)	2017

9	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Inertial Response Support in LFC by Linearized Delta Torque Model Based DFIG.	2018 Second International Conference on Advances in Electronics, Computers and Communications (ICAECC)	2018
10	S Zahid Nabi Dar **Mairaj Ud Din Mufti** Sheikh Javed Iqbal Shameem Ahmad Lone	Improved automatic generation characteristics in isolated power system with genetically tuned ultra battery storage.	2017 International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT)	2017
11	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Integration of DFIG in damping LFC characteristics in wind penetrated power system.	2017 Recent Developments in Control, Automation & Power Engineering (RDCAPE)	2017
12	S Zahid Nabi Dar **Mairaj Ud Din Mufti** Sheikh Javed Iqbal Shameem Ahmad Lone	Analysing two area power system with genetically tuned superconductor magnetic energy storage system.	2017 International Conference on Intelligent Computing,Instrumentation and Control Technologies (ICICICT)	2017
13	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Enhanced power and frequency response characteristics in Main area power system with superconducting magnetic energy storage.	2017 International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT)	2017
14	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Improved load frequency response in two area power system with battery energy storage.	2017 International Conference on Computing, Communication and Automation (ICCCA)	2017
15	S Zahid Nabi Dar **Mairaj Ud Din Mufti**	Improved load frequency characteristics in isolated power system with genetically tuned battery energy storage.	2017 Recent Developments in Control, Automation & Power Engineering (RDCAPE)	2017

16	Insha Muzaffar Hailiya Ahsan **Mairaj Ud Din Mufti** S A Lone	MATLAB/Simulink Model for Stability Studies of A Multi-Machine Power System incorporating Static VAR Compensator and Power System Stabilizers.	2International Conference on Engineering Research & Applications (ICERA) İstanbul	2017
17	Shameem Ahmad Lone **Mairaj Ud Din Mufti**	Integrating a Redox Flow Battery System with a Wind-Diesel Power System. *DOI: 10.1109/PEDES.2006.344283*	2006 International Conference on Power Electronic, Drives and Energy Systems	2006
18	Mairaj-ud-Din Mufti R. Balasubramanian S.C. Tripathy	Self tuning control of wind-diesel power systems.	Proceedings of International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth	1996
19	Priyanka Nagwanshi Mubashar Yaqoob Zargar **Mairaj Ud Din Mufti**	Fuzzy logic based battery storage system for a standalone wind energy conversion system.	2017 International Conference on Computing, Communication and Automation (ICCCA)	2017
20	Mairaj-ud-Din Mufti Mubashar Yaqoob Zargar Shameem Ahmed Lone	Predictive controlled SMES for frequency control of hybrid wind-diesel standalone system.	2017 International Conference on Computing, Communication and Automation (ICCCA)	2017
21	Mubashar Yaqoob Zargar Mairaj-ud-Din Mufti Shameem Ahmed Lone	Modelling and control of wind solar hybrid system using energy storage system.	2016 International Conference on Computing, Communication and Automation (ICCCA)	2016
22	Mubashar Yaqoob Zargar Mairaj-ud-Din Mufti Shameem Ahmed Lone	Voltage and frequency control of a hybrid Wind-Diesel system using SVC and predictively controlled SMES.	2017 6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA)	2017

PATENTS

APPLICATION OF VFT COORDINATED WITH ENERGY STORAGE SYSTEM(S) FOR LOAD FREQUENCY CONTROL.(Published in official Journal of Patent office), 2021.

SPONSORED PROJECTS

Title of Project	Sponsoring Organization	Role
Application of Intelligent control to hybrid Wind diesel Solar Power System	CPRI Bangalore, India	Principal Investigator

Details of Ph.D. Thesis supervised

S.No.	Title of Ph.D. Thesis	Guide/ Co-Guide	Institute	Name of Student(s)	Year	Status (Awarded/ Submitted)
1	Fuzzy Logic Control Of Stand-Alone Power Systems	Guide	NIT Srinagar	Shameem Ahmad Lone	2006	Awarded
2	Intelligent Control of Energy Storage Devices for Power System Applications	Guide	NIT Srinagar	Sheikh Javed Iqbal	2014	Awarded
3	Adaptive Predictive Control of Superconducting Magnetic Energy Storage System for Power Quality Improvement of a Standalone Wind-Diesel Power System	Co-Guide	NIT Srinagar	Mubasher Yaqoob Zargar	2018	Awarded
4	Intelligent Application of FACTS Devices in Wind Penetrated Power Systems	Guide	NIT Srinagar	S Zahid Nabi Dar	2018	Awarded
5	Predictively Controlled Energy Storage Devices for Power System Stability Studies	Guide	NIT Srinagar	Hailiya Ahsan	2020	Awarded