


TEQIP-III International Online Conference

On

Smart Grid Energy Systems and Control (SGESC-2021) (March 19-21, 2021)
Paper Presentation Schedule

Day 1 19 March 2021	9.30AM to 10.30AM	Key note lecture 10.30 AM to 11.45 AM	Session 1 12.00PM to 1.30PM (Paper ID)	Session 2 12.00PM to 1.30PM (Paper ID)	Session 3 12.00PM to 1.30PM (Paper ID)	Plenary Lecture 1 2.30 PM to 3.30PM	Session 4 3.45 PM to 5.15 PM (Paper ID)	Session 5 3.45 PM to 5.15 PM (Paper ID)	Session 6 3.45 PM to 5.15 PM (Paper ID)
	Inaugural Ceremony	Prof. Tek Tjing Lie, Auckland University of Technology	2, 21, 22, 24, 25, 37	3, 4, 7, 10, 12, 17	6,9,18, 26,30,32	Prof. Sukumar Mishra IIT Delhi	43, 49, 55, 69, 73, 90	23, 28, 31, 38, 44, 67	34, 52, 53, 56, 60, 61, 63
Day 2 20 March 2021	Plenary lecture 2 9.00AM to 10.15 AM	Session 7 10.30AM to 12.00PM (Paper ID)	Session 8 10.30AM to 12.00PM (Paper ID)	Session 9 10.30AM to 12.00PM (Paper ID)	Session 10 12.00PM to 1.30PM (Paper ID)	Session 11 12.00PM to 1.30PM (Paper ID)	Session 12 12.00PM to 1.30PM (Paper ID)	Plenary Lecture 3 2.30 PM to 3.30 PM	Session 13 3.45 PM to 5.15 PM (Paper ID)
	Prof. Wenzhong Gao University of Denver, Denver USA	104, 105, 148, 36, 124, 138	74, 76, 89, 108, 119, 120	65, 72, 78, 95, 96, 98	139, 140, 111,150, 154, 159	126, 165, 186, 188, 33, 58	113, 123, 125, 130, 136, 137	Prof. S. A. Soman, IIT Bombay	174,146, 147, 118, 45, 102,109

Day 2 20 March 2021		Session 14 3.45 PM to 5.15 PM	Session 15 3.45 PM to 5.15 PM						
		59, 100, 112, 115, 122, 129	153,157, 158, 160, 169, 171, 172						
Day 3 21 March 2021	Plenary lecture 2 10.30 AM to 11.45 AM	Session 16 12.00AM to 01.30PM (Paper ID)	Session 17 12.00AM to 01.30PM (Paper ID)	Session 18 12.00AM to 01.30PM (Paper ID)	Valedictory Function 2.30 PM to 4.00 PM				
	Prof. Anurag K. Srivastava Washington State University, USA	79, 155, 133, 42, 93, 121	144, 149, 151, 189, 141, 152	175, 176, 177, 179, 182, 184, 54					

Day -01 19/03/2021	Time 12:00pm to 01:30pm		
Session	Paper Id	Title	Authors
Session-01	2	Smart Grid Cyber Vulnerabilities and Mitigation Measures	Priya R Krishnan and Joseph kutti Jacob
	21	Impact of OLTC on Nodal Pricing of Distribution System and Comparison with DSTATCOM	Banothu Sridhar and Ashwani Kumar Sharma
	22	Allocation of wind based distributed generation using bacterial foraging optimization algorithm in electrical distribution system	Ashish Verma and Dr. Atma Ram Gupta
	24	Reactive Power Requirement for Operating Wind Driven Micro Grid in Presence of Several Proportions and Class of Static Load	Nitin Kumar Saxena, Varun Gupta, Raj Sekhar Gupta, Ashwani Kumar and Atma Ram Gupta
	25	Renewable Energy Resource Availability and Supply Guide in India	Dr Manish Kumar and Mr. Parveen Kumar
	37	Cloud Computing Data Security Techniques — A Survey	Mayanka Gaur and Dr. Manisha Jailia

Day -01 19/03/2021		Time 03:45pm to 05:15pm	
Session	Paper Id	Title	Authors
Session-4	43	Review on Power Restoration techniques for smart power Distribution systems	<u>Sarathkumar D, Srinivasan M, Albert Alexander Stonier and Ravi Samikannu</u>
	49	Feasibility analysis of standalone hybrid renewable energy system for Kiltan Island in India	Mohammad Shariz Ansari
	55	Impact of wind power participation on Congestion Management considering seasonal load in pool electricity market while ensuring loadability limit	Rahul Sagwal and Ashwani Kumar
	69	Research and Analysis of Efficiency of Power Consumption at Tunneling Sections	<u>Vadim Petrov, Ahlitdin Sadridinov and Alexander Pichuev</u>
	73	Techniques Employed In Renewable Energy Sources Fed Smart Grid- A Comparative Study	Nivedha M and Dr.Titus S
	90	Numerical simulation of time fractional advection-diffusion-reaction equation using exponential B-splines	A.S.V. Ravi Kanth and Neetu Garg

Day -02 20/03/2021	Time 10:30pm to 12:00pm		
Session	Paper Id	Title	Authors
Session-7	104	Combined economic emission dispatch of thermal and solar photo voltaic generation systems by particle swarm optimization	Rajanish Kumar Kaushal and Tilak Thakur
	105	Impact of Capacitor Banks on the Nodal Prices of Meshed Distribution System	Karimulla Polisetti, Dr. Atma Ram Gupta and Ashwani Kumar Sharma
	148	Energy Scheduling of Residential Household Appliances with Wind Energy Source and Energy Storage Device	Neelam Jaiswal and Sandeep Kakran
	36	Real Power Loss Reduction by Hybridization of Augmented Particle Swarm Optimization with Improved Crow Search Algorithm	Dr Lenin Kanagasabai
	124	Comparative Analysis of Peak Limiting Strategies in the Home Energy Management System	Vikas Deep Juyal and Sandeep Kakran
	138	Scheduling of GENCOs considering Emissions in Cost based Unit Commitment Problem	Vineet Kumar, R. Naresh, Veena Sharma and V. Kumar

Day -02 20/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-10	139	Unit Commitment Including Wind and Hydro Generators Using DWOA	Ankit Uniyal and Ashwani Kumar Sharma
	140	Generation and Reserve Scheduling under Frequency Linked Pricing Regime	Yajvender Pal Verma and Ashwani Kumar
	111	Impact of Wind Generation Participation on Congested Power System	Smriti Singh, Dr. Atma Ram Gupta and Ashwani Kumar Sharma
	150	Opposition based Competitive Swarm Optimizer for optimal sizing and siting of DG units in Radial System	Soumyabrata Das and Amar Kumar Barik
	154	An Optimization Model for Commercial Loads Under Time of Use and Real Time Pricing Scheme	Manish Sharma and Sandeep Kakran
	159	Multi-Objective Stochastic Volt/VAR Optimization in AC-DC Hybrid Distribution Network considering Soft Open Point	Vijay Babu Pamshetti, V V S N Murty, S P Singh and Ashwani Kumar Sharma

Day -02 20/03/2021		Time 03:45pm to 05:15pm	
Session	Paper Id	Title	Authors
Session-13	174	Effective power management in Renewable Energy Resources based Power system incorporating Electric Spring	Om Krishan and Sathans Suhag
	146	Bismuth Phosphate as an Efficient Electrode Material for Energy Storage Device Applications	Aman Joshi, Sunaina Saini and Prakash Chand
	147	Recent Advancement in Tungsten oxide as an Electrode Material for Supercapacitor Applications	Sunaina Saini, Aman Joshi and Prakash Chand
	118	GUPFC impact in managing the congestion using Generation Rescheduling	Charan Sekhar and Ashwani Kumar Sharma
	45	Implementation of Black Widow Optimization Algorithm for Loss Minimization in an Unbalanced Radial Distribution System	<u>Aliva Routray, Khyati D. Mistry and Sabha Raj Arya</u>
	102	Bacterial foraging optimization based allocation of PV-DG in Power Distribution System	Ashish Verma and Dr. Atma Ram Gupta
	109	Effect of penetration levels on thermal demands with V and f regulation in multi-energy microgrid	Ankit Uniyal, Saumendra Sarangi and Mahiraj Rawat

Day -03 21/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-16	79	Modeling and performance analysis of a PV system under mismatch Scenarios- A Review	Shahida Khatoon, Mohd Faisal Jalil and Rahma Aman
	155	An analytical study to determine performance and economic benefits of the Grid interactive Rooftop solar power plants	Bhaskarjyoti Das and Ashwani Kumar
	133	Demand Side Management Approach using Heuristic Optimization with Solar Generation and Storage Devices for Future Smart Grid	Neeraj Kumar Mahto, Smriti Jaiswal and Dulal Chandra Das
	42	Optimal Placement of Micro-Phasor Measurement Units in Active Distribution Systems using Mixed Integer Programming	V. V. S. N. Murty Vallem, Ramakrishna Pothuraju, Ashwani Kumar and Vijay Babu Pamshetti
	93	Binary Metal Oxide Spinel-NiCo ₂ O ₄ as Electrode Material for Supercapacitor application	Manpreet Kaur, Hardeep Anand and Prakash Chand
	121	Impact of Storage Energy on Operation and Control of Smart Grid	Veerpratap Meena

Day -01 19/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-2	3	Enhanced operation of Grid connected Inverter to Improve Power Quality Issues, Harmonic Compensation with proposed novel approach	Sudhir Singh, Atul Kumar Kushwaha, Ankit Singhal and Sourav Diwania
	4	DESIGN OF A POWER CONVERTER FOR DOMESTIC INDUCTION HEATING DRIVEN FROM PV MODULE	Mizbah Farheen, Omsekhar Indela and Sridhar S
	7	Comparative Power Quality Analysis of SRF and UVT Control based DSTATCOM	Pradeep Kumar
	10	Double Stage Solar PV Array Fed V/F Controlled Induction Motor for Indian irrigation applications	Josephine R L, Yeramareddy Ganga Prasad Reddy and Rachaputi Bhanu Prakash
	12	Moisture Estimation of Power Transformer Using Transfer Function of Conventional Debye Model	Chandra Madhab Banerjee, Arijit Baral and Sivaji Chakravorti
	17	Detection of Inter-Turn Faults in Transformers by Analyzing Neutral Current	erome P Thomas and Arjun Visakh

Day -01 19/03/2021		Time 03:45pm to 05:15pm	
Session	Paper Id	Title	Authors
Session-5	23	Diode based Passive Li-Ion Battery Balancer	Gaurav Pratap Singh, Lakshay Bhatia, Bharat Singh, Yash Lehri and Yogesh Sehgal
	28	Comparison of used conductor for corona, Radio Interference Voltage (RIV) characteristics and audible noise values with unused conductor	Devender Rao K, Venkateshwara Rao G, Ramesh G and Govardhanachari K
	31	A Switched-Capacitor Based Generalized Topology for Multilevel Inverter with Cross-Switched Structure	Avinash Maurya and Ambarisha Mishra
	38	Harmonics Mitigation Techniques in Grid Integrated PV based Microgrid: A Comparative Analysis	Avdhesh Kumar, Rachana Garg and Priya Mahajan
	44	Coordinated Charging of Electric Vehicles in Smart Grids to Minimize Distribution Loss	Sandipan Roy, Arjun Visakh and Selvan M P
	67	Analysis the performance of bio- degradable insulation material in different climate zone of India	Shaheen Hasan, Sabah Khan, Iram Akhtar and Sheeraz Kirmani

Day -02 20/03/2021	Time 10:30pm to 12:00pm		
Session	Paper Id	Title	Authors
Session-8	74	Solar Powered PMSM Driven Battery Supported Water Pumping System	Apoorva Sharma and Tripurarath Gupta
	76	Advanced Control Approach for Solar Assisted Electric Vehicle Drive	Iram Akhtar, Sheeraz Kirmani, Shaheen Hasan and Sabah Khan
	89	Assessing the reusability of 3-d printer filaments	Parth Patpatiya and Nidhi Arora
	108	Modelling and State of Charge estimation of Li-ion battery for Electric Vehicle	A Maheshwari and S Nageswari
	119	Interval modeling of Riverol-Pilipovik water treatment system	Nitin Mathur and Vinay Pratap Singh
	120	Interval Modelling of Cuk Converter	Surjeet Choudhary, Vinay Pratap Singh and Veerpratap Meena

Day -02 20/03/2021	Time 12:00pm to 01:30pm		
Session	Paper Id	Title	Authors
Session-11	126	Investigation of high voltage circuit breakers for breaking capacity based on simulation models	Vadim Petrov, Ivan Morozov, Nikolay Kuznetsov and Egor Soloviev
	165	Investigation of Mustard Seed Biodiesel as Alternative Fuel for Compression Ignition Engine	Nasim Hasan and Wolteji Bena
	186	Planning and Analysis of EV Charging Station with Solar-PV in Grid Connected System of Durgapur	Aashish Kumar Bohre, Partha Sarathee Bhowmik, Baseem Khan, Tushar Kanti Bera, Irfan Ahmad and Aniruddha Bhattacharya
	188	Study of Solar MPPT with Multi-level Cascaded Inverter Connected with Pumping System	Manoj Kumar Sahu, Chinmayee Sahoo, Jagan Mohana Rao Malla and Siddhartha Behera
	33	Modelling and Analysis of Indirect Field Oriented Vector Control of Induction Motor (IM)	Tanzeel Imtiyaz, Anupama Prakash, Farhad Ilahi Bakhsh and Anjali Jain
	58	A New Nine Level Multilevel Inverter Topology with 1:3 Source Configuration using Unified Low Switching Frequency Control Scheme	Aratipamula Bhanuchandar and Bhagwan K Murthy

Day -02 20/03/2021	Time 03:45pm to 05:15pm		
Session	Paper Id	Title	Authors
Session-14	59	Distribution System Analysis with Multiple PV and DSTATCOM allocation using Flower Pollination Algorithm	Nandola Maitrey Bharatbhai and Dr. Atma Ram Gupta
	100	Modelling and Analysis of Vector Controlled Doubly Fed Induction Generator (DFIG)	Tanzeel Imtiyaz, Farhad Ilahi Bakhsh and Anjali Jain
	112	Mitigation of Voltage Disturbances in Photovoltaic fed Grid System using Cascaded Soft Computing Controller	Kasa Sudheer, Suresh Penagaluru and Prabakaran N
	115	Induction Machine Characteristics control in Field Weakening Region for Propulsion Application	Nisha G K and Lakaparampil Z V
	122	A Novel Hybrid GMPPT Scheme based on P&O-MM with Reduced Output Power Oscillations under PSC for PV System	Dr Muralidhar Nayak Bhukya, Dr. P T Krishna Sai, Dr. Manish Kumar, Dr Shobha Rani Depuru and Dr T Sudhakar Babu
	129	Biogeography Based Optimization for Power Quality improvement in HRES system	B. Srikanth Goud, Mohit Bajaj, Naveen Sharma and Ch. Rami Reddy

Day -03 21/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-17	144	Comparative Study of Closed Loop Controlled Parallel Connected Converter Methods for Minimization of Circulating Current	Dr Nisha G K and Jeneena Babu
	149	Single Switch Non-Isolated High-Gain Converter with Reduced Voltage Stress	Aakriti Pandey and Swapnajit Pattnaik
	151	Torque Ripple Minimization of SRM Using Sliding Mode Current Controller And Torque Sharing Function	Stella Kurian and Nisha G.K.
	189	SIMULATION OF SOLAR-GRID CHARGING OF ELECTRIC VEHICLES USING PI CONTROLLER	Gaurav Gangil and Sunil Kumar Goyal
	141	Blockchain technology in smart grids and micro grids: a critical review of challenges and opportunities	Avinash Pareek, Prashant Singh and J. S. Lather
	152	A Hybrid Islanding Detection Technique for Synchronous Generator based Microgrids	Santosh Kumar Singh, Mayank Rawal, Mahiraj Singh Rawat and Tripurari Nath Gupta

Day -01 19/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-3	6	COMBINATION BFPSO TUNED INTELLIGENT CONTROLLER FOR MAXIMUM POWER POINT TRACKING IN SOLAR PHOTOVOLTAIC FARM INTERCONNECTED TO GRID SUPPLY	Jegajothi Balakrishnan, Yaashuwanth Calpakkam, Prathibanandhi K and Sudhakar S
	9	Non-linear Error Function based Extended Kalman Filter with Improved Scaling Factor for Cancer Chemotherapy	Utkarsha L. Mohite and Hirenkumar G. Patel
	18	Artificial Neural Network Based Automatic Generation Control for Two-Area Nuclear-Thermal System	Mugdha Mishra and Nitin Kumar Saxena
	26	Gas Leakage Alert System	Sudhanshu Sharma, Sumit Kumar, Abhishek Chawla, Paras Darmal and Bharat Singh
	30	Design of Hybrid Fuzzy-PID Power Management Unit for Control of Battery-Supercapacitor HEV using Unified LA-92 Drive Cycle	Bibaswan Bose, Dr. Vijay Kumar Tayal and Bedatri Moulik
	32	Event Triggered Sliding Mode Controller Design for Interconnected Power system	Aradhna Patel

Day -01 19/03/2021		Time 03:45pm to 05:15pm	
Session	Paper Id	Title	Authors
Session-6	34	PSO Tuned PID Controller for DC Motor Speed Control	Aaditya Sharma, Veena Sharma and Op Rahi
	52	A Real Time Implementation of Performance Monitoring in Solar Photovoltaics Using Internet of Things	Dishore Shunmugham Vanaja and Albert Alexander Stonier
	53	One hour ahead solar irradiation forecast by deep learning network using meteorological variables	Pardeep Singla, Manoj Duhan and Sumit Saroha
	56	Heat Transfer Analysis Through Ducts of Different Geometries with Extended Surfaces	Monoj Bardalai, B.K. Das, I.A. Chaudhury, S Kumar and P.P. Dutta
	60	Frequency Regulation of Interconnected Power Generating System Using Ant Colony Technique Tuned PID Controller	Kumarakrishnan V, Vijayakumar G, Boopathi D, Jagatheesan K, Saravanan S and Anand B
	61	Duhem Hysteresis Modelling of Single Axis Piezoelectric Actuation System	Sabarianand D V and Karthikeyan P
	63	Attitude and Vibration Control of a Solar Paneled Satellite using Quantitative Feedback Theory Based Robust Controller	Aritra Sinha, Sandipan Prasad Chakravarty, Pratik Dutta and Dr. Prasanta Roy

Day -02 20/03/2021		Time 10:30pm to 12:00pm	
Session	Paper Id	Title	Authors
Session-9	65	Mathematical model of the disease Psoriasis : An optimal control-based approach	Ramashis Banerjee and Raj Kumar Biswas
	72	Fault Detection in Floating PV System Using DC Leakage Current	G Srinivasa Murthy
	78	EFFECT OF TEMPERATURE AND SUBSTRATE BIASING OF TITANIUM THIN FILM ON NORMAL AND PATTERNED SILICON WAFER	Rajagobalan Balasundaram and G Meenakshi
	95	IoT Based Monitoring System for Smart Meter Application	<u>Ranjit Singh Sarban Singh</u>
	96	Numerical Approximation of Variation of Performance of Pneumatic Artificial Muscles with Change in Altitude	Bitopon Das, Polash Pratim Dutta and Partha P Dutta
	98	Variable Selection Technique for Solar Global Irradiance Prediction	Isha Arora, Tarlochan Kaur and Jaimala Gambhir

Day -02 20/03/2021	Time 12:00pm to 01:30pm		
Session	Paper Id	Title	Authors
Session-12	113	ZigBee Based Health Monitoring System	G Rajesh Gowd and M.P.R Prasad
	123	Time Series Forecasting for Electricity Consumption using ML and DL Algorithms	Neeraj Kumar, Sumit Mishra, Tanmay Baweja, Ashutosh Dubey and Abhishek Dhiman
	125	A Comparison of machine learning algorithms for Short Term Load Forecasting	Neeraj Kumar, Apoorva Jain, Shalini Sati, Kushagra Kapoor and Pratham Garg
	130	Design and Development of Phase Lock Loop (PLL) Premised Islanding Investigative Techniques	Mohan Thakre and Nishant Matale
	136	Genetic Algorithm based Sliding Mode Controller for underactuated 2-DoF Gyroscope	Manish Patel and Bhanu Pratap
	137	Higher order sliding mode controller design for 2-DoF torsion system with Genetic Algorithm based tuning.	Priyam Rai and Bhanu Pratap

Day -02 20/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-15	153	DROWSINESS DETECTION SYSTEM IN REAL TIME	Sheersh Kaushik, Purnima Gupta, Sonal Maan, Vineet Kumar Singh and Saquib Faraz
	157	An improved stabilization criteria for linear Systems with time-varying delay using a new Lyapunov-Krasovskii functional	K C Rajendra Prasad, N K Arun and M Venkatesh
	158	Load Frequency Control of Multi-Area Thermal Power System Using Grey Wolf Optimization	Narender Saini and Jyoti Ohri
	160	Load Frequency Control of Two-Area Deregulated Power System using Hybrid PSO-GSA-TVAC Algorithm	Sushrut Brahmachari and Saurabh Chanana
	169	Performance Comparison of GA, PSO and WCA for Three Area Interconnected Load Frequency Control System	Kirtiman Godara, Narendra Kumar and Karni Pratap Palawat
	171	A reliable numerical approach for Liouville-Caputo time-fractional Belousov-Zhabotinsky equation arising in Chemical oscillatory reaction	Amit Prakash, Hardish Kaur, Rahul and Manish Goyal
	172	Detection of High Impedance Fault using Advanced ELM based Neuro-fuzzy Inference System	Shihabudheen K V.

Day -03 21/03/2021		Time 12:00pm to 01:30pm	
Session	Paper Id	Title	Authors
Session-18	175	Implementation of Neural Network Based PID Controller for Speed Control of an IC Engine	Naga Siva Praneeth Velagapudi, Viswanathula Bharath Kumar, Dasa Sampath, Y. V. Pavan Kumar, D. John Pradeep, Ch. Pradeep Reddy and Ramani Kannan
	176	Methods for Effective Speed Control of DC Shunt Motor- Part1: Classical PID Controller Tuning Methods	R. Karthik, E. Tejendra, R. Gowrav, Harshit Harsh and Y. V. Pavan Kumar
	177	Modelling of Neural Network Based MPPT Controller for Wind Turbine Energy System	R. Karthik, Harshit Harsh, Y. V. Pavan Kumar, D. John Pradeep, Ch. Pradeep Reddy and Ramani Kannan
	179	Monitoring and Analysing the daily routine of senior citizens in old age home using IoT.	Md Saquib Faraz, Areeb Kamal, Mohd Ali Taqvi, Mohd Aaqil Rehman and Noman Ahmed
	182	A comparative analysis of LQR and SMC for Quanser AERO	Saurabh Kumar and Lillie Dewan
	184	Numerical investigation of fractional model of Biswas-Milovic equation via Laplace transform	Amit Prakash and Hardish Kaur
	54	Performance Analysis of Cache Memory Architecture for Core Processor	Reeya Agrawal and Manish Kumar

Team SGESC 2021