

PROGRAM SCHEDULE

Day 1- Friday, 05th March 2021

09:15 - 10:15 AM	Inaugural Ceremony
10:15 - 10:30 AM	High tea / Coffee break
10:30 - 11:10 AM	Shri Nabarun Roy
Keynote/Plenary Session – 01	Chief General Manager, POSOCO “Challenges Associated with The Integration of Renewables Energy in Indian Grid”
11:20 - 12:00 PM	Prof. Akshya K. Swain
Keynote/Plenary Session – 02	Associate Professor, Electrical and Computer Engineering, University of Auckland, New Zealand “Smartgrid: From the Perspective of Control Systems”
12:10 - 01:00 PM	Panel Discussion-I
01:00 - 02:00 PM	Lunch break
02:00 - 03:45 PM	Technical Sessions – TS-01, TS-02, TS-03, TS-04
03:45 - 04:00 PM	Tea break
04:00 - 05:30 PM	Technical Sessions – TS-05, TS-06, TS-07, TS-08

PROGRAM SCHEDULE

Day 2- Saturday, 06th March 2021

09:00 - 09:40 AM Keynote/Plenary Session - 03	Prof. Sukumar Mishra Professor and Associate Dean R&D, Department of Electrical Engineering, Indian Institute of Technology Delhi "Grid Integration of Renewable Energy"
10:00- 10:40 AM Keynote/Plenary Session - 04	Prof. Saifur Rahman Director, Virginia Tech Advanced Research Institute, USA "Role of the Smart Grid in Facilitating the Integration of Renewables"
10:45- 11:00 AM	Tea break
11:00 - 01:00 PM	Technical Sessions – TS-09, TS-10, TS-11, TS-12
01:00 - 02:00 PM	Lunch break
02:00 - 04:00 PM	Technical Sessions – TS-13, TS-14, TS-15, TS-16

PROGRAM SCHEDULE

Day 3- Sunday, 07th March 2021

09:00 - 09:40 AM Keynote/Plenary Session – 05	Prof. Bidyadhar Subudhi Professor and Head, School of Electrical Sciences, Indian Institute of Technology, Goa “Distributed Control Schemes of a Microgrid”
10:00 - 10:40 AM Keynote/Plenary Session – 06	Prof. Tarlochan S Sidhu Faculty of Engineering and Applied Science, Ontario Tech University Canada “Emerging Power Systems - Protection Challenges and Possible Solutions”
10:45- 11:00 AM	Tea break
11:00 - 01:00 PM	Technical Sessions – TS-17, TS-18, TS-19, TS-20
01:00 - 02:00 PM	Lunch break
02:00 - 02:50 PM	Panel Discussion-II
03:30 - 04:30 PM	Valediction Ceremony
04:30- 04:45 PM	Tea break

Technical Sessions (TS) Schedule (Parallel Sessions)

Day 1- Friday, 05th March 2021		Day 2- Saturday, 06th March 2021		Day 3- Sunday, 07th March 2021	
TS ID	Track-1 Modern Power Systems Time: 02:00 - 03:45 PM	TS ID	Track-3 Advanced Power Converters for Renewable Energy Application Time: 11:00 - 01:00 PM	TS ID	Track-5 Recent Advancements in Sustainable Energy Development Time: 11:00 - 01:00 PM
	Paper ID		Paper ID		Paper ID
TS-01	09, 84, 99, 153, 160, 171, 217	TS-09	11, 113, 169, 182, 198, 208, 288	TS-17	15, 39, 43, 80, 140, 284
TS-02	34, 36, 109, 124, 215, 222, 289	TS-10	13, 53, 96, 179, 201, 234, 290	TS-18	67, 114, 125, 131, 241, 286, 287
TS-03	14, 49, 60, 133, 176, 272, 292	TS-11	91, 158, 190, 246, 248, 253, 293	TS-19	28, 30, 31, 93, 117, 141, 213
TS-04	151, 157, 197, 211, 258, 260, 262	TS-12	82, 121, 126, 134, 135, 152, 162	TS-20	47, 63, 69, 94, 100, 195, 259
Day 1- Friday, 05th March 2021		Day 2- Saturday, 06th March 2021			
TS ID	Track-2 Clean Technologies Time: 04:00 - 05:30 PM	TS ID	Track-4 Advanced Control and Converters in Microgrid Systems Time: 02:00 - 04:00 PM	TS ID	
	Paper ID		Paper ID		
TS-05	33, 35, 154, 173, 184, 245, 257	TS-13	50, 68, 194, 254, 274, 275		
TS-06	206, 218, 220, 223, 224, 227, 255	TS-14	112, 115, 130, 204, 268, 281		
TS-07	23, 42, 116, 161, 244, 249, 256	TS-15	37, 38, 52, 88, 127, 132, 291		
TS-08	172, 186, 193, 236, 261, 269	TS-16	17, 111, 137, 167, 178, 230		

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Track-1

Modern Power Systems

Technical Session (TS-01) Schedule

Day 1- Friday, 05th March 2021, Time: 02:00 - 03:45 PM

Session (Parallel)	Soft Computing Application in Active Distribution Network
Session Chair(s)	Pravat Kumar Ray (NIT Rourkela), Pratap Sekhar Puhan (SIST Hyderabad)
Paper ID: 09	Performance Investigation of L-type Shunt Active Power Filter supported with Battery using UVT Control Method for distorted Loads Author(s): Pratap Sekhar Puhan (SIST Hyderabad)*; Anusha Valla (SIST Hyderabad); Satyabrata Sahoo (Nalla Malla Reddy Engineering College, Hyderabad)
Paper ID: 84	Performance Analysis of Photovoltaic fed Series active Power Filter for Power Quality Improvement Author(s): Erugurala Madhurima (SIST Hyderabad), Pratap Sekhar Puhan (SIST Hyderabad)*; Sumanth.K (SIST Hyderabad)
Paper ID: 99	Windings of aa Power Transformer, Frequency Response and Its FEM Modelling Author(s): Sibabrata Pradhan (IIT Guwahati)*; Sisir Kumar Nayak (IIT Guwahati)
Paper ID: 153	Experimental realisation of DSTATCOM for Power Quality Enhancement Under Various Load Perturbations Author(s): Pushpanjali Sadangi (O.P.Jindal University, Chhatisgarh); Sushree Diptimayee Swain (O.P. Jindal University, Chhatisgarh); Pravat Ray (NIT Rourkela)*
Paper ID: 160	Automatic Load Frequency Control of Distributed Generations in a Microgrid Author(s): Pravat Ray (NIT Rourkela)*; Pratap Sekhar Puhan (SIST Hyderabad); Priyanka Priyadarshini (NIT Rourkela)
Paper ID: 171	Robust Power Management and Control for Hybrid AC-DC Microgrid Author(s): Parusharamulu Buduma (IIT Delhi)*; Madan Kumar Das (IIT Delhi); Sukumar Mishra (IIT Delhi); Gayadhar Panda (NIT Meghalaya)
Paper ID: 217	Design and Control of PV-UPQC Using Variable Leaky LMS Based Algorithm for Power Quality Enhancement Author(s): Pragnyashree Ray (NIT Rourkela)*; Pravat Ray (NIT Rourkela)

Technical Session (TS-02) Schedule

Day 1- Friday, 05th March 2021, Time: 02:00 - 03:45 PM

Session (Parallel)	Stability and Protection of Microgrid System
Session Chair(s)	Prakash K. Ray (CET, Bhubaneswar), Shaik Affijulla (NIT Meghalaya)
Paper ID: 34	A Comprehensive Review on Microgrid Protection: Issues and Challenges Author(s): Shanti S Rath (M/S Vedanta Limited); Gayadhar Panda (NIT Meghalaya); Prakash K. Ray (CET Bhubaneswar)*; Asit Mohanty (CET Bhubaneswar)
Paper ID: 36	Resiliency Determination of North Eastern Regional Grid of India Author(s): V Suresh (POSOCO), S C De (POSOCO), Bimal Swargiary (POSOCO), Subhash Kumar (POSOCO), Palash Jyoti Borah (POSOCO)* and Chitra Bahadur Thapa (POSOCO)
Paper ID: 109	Analysis and Comparison of Various Islanding Detection Schemes for DC Microgrids Author(s): Bhabani Kumari Choudhury (IIT Roorkee)*; Premalata Jena (IIT Roorkee)
Paper ID: 124	Micro PMU Placement In Distribution Network With Probabilistic Contingency and Bound Budget Author(s): Manas Mukherjee (NIT Durgapur)*; Biman Kumar Saha Roy (NIT Durgapur)
Paper ID: 215	Stability Analysis of a Grid Connected Microgrid under Numerous Fault Conditions Based On Centralized Digital-Controlled HESS Author(s): Puja Dash (GVPCE)*; Y. Usha Rani (GVPCE); Gayadhar Panda (NIT Meghalaya); Arindita Saha (Regent Education & Research Foundation Group of Institutions)
Paper ID: 222	Bifurcation, Chaos and PID Sliding Mode Control of 3-Bus Power System Author(s): Piklu Das (NIT Meghalaya)*; Prakash Chandra Gupta (NIT Meghalaya); Piyush Pratap Singh (NIT Meghalaya)
Paper ID: 289	Total Harmonic Distortion based Fault Detection in Islanded DC Microgrid Author(s): Satyavarta Kumar Prince (NIT Meghalaya)*; Shaik Affijulla (NIT Meghalaya); Gayadhar Panda (NIT Meghalaya)

Technical Session (TS-03) Schedule

Day 1- Friday, 05th March 2021, Time: 02:00 - 03:45 PM

Session (Parallel)	Power Electronics Interfaces and their control for Distributed Energy Resources
Session Chair(s)	Amritesh Kumar (NIT Silchar), Ksh Milan Singh (NIT Meghalaya)
Paper ID: 14	Design and Development of Vector Controller with MTPA Strategy for Interior PMSM in Electric Vehicle Author(s): Manas Ranjan Jena (NIT Rourkela)*; Kanungo B Mohanty (NIT Rourkela)
Paper ID: 49	A Robust Sensorless Speed Estimation Method for SCIG based WECS with Reduced Current Sensors Author(s): Asha Rani M. A. (NIT Silchar)*; Mamata Debbarma (NIT Silchar); Bala Krishna Pydi (NIT Silchar)
Paper ID: 60	Primary Control Strategies for Power Sharing and Voltage Regulation in DC Microgrid: A Review Author(s): Ravi Ranjan (NIT Silchar)*; Raj Aryan (NIT Silchar); Amritesh Kumar (NIT Silchar)
Paper ID: 133	Distributed Primary and Secondary Control Strategy for Power Sharing and Voltage Restoration in a DC Microgrid Author(s): Raj Aryan (NIT Silchar)*; Ravi Ranjan (NIT Silchar); Amritesh Kumar (NIT Silchar)
Paper ID: 176	Single Current Sensor-Based Vector Control of Solar PV-Battery Assisted Induction Motor Drive for Electric Vehicle Author(s): Kousalya V (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 272	Impact of Plug-in Electric Vehicle Integration in Distribution System Congestion Management Author(s): Subhasish Deb (Mizoram University); Arup Kumar Goswami (NIT, Silchar)*; Rahul Lamichane Chetri (NIT Silchar); Rajesh Roy (NIT Silchar)
Paper ID: 292	Delayed LMS Based Adaptive Control of PV-DSTATCOM System Author(s): Ikhlaq Hussain (Kashmir University)*; Rahul Agarwal (IIT Delhi); Bhim Singh (IIT Delhi)

Technical Session (TS-04) Schedule

Day 1- Friday, 05th March 2021, Time: 02:00 - 03:45 PM

Session (Parallel)	Modeling and Control of Electrical Systems
Session Chair(s)	Debashisha Jena (NIT Surathkal), Bunil K Balabantaray (NIT Meghalaya)
Paper ID: 151	Multi Sensor Data Acquisition for the Motion Control of Electric Vehicles Author(s): Pranjal Barman (Tezpur University)*; Santanu Sharma (Tezpur University)
Paper ID: 157	Equivalent Circuit Modelling of Transformer Oil-Paper Insulation from Frequency Domain Spectroscopy Measurements Author(s): Soumyadeep Chowdhury (NIT Calicut)*; Soumya Chatterjee (Jadavpur University); Nasirul Haque (NIT Calicut)
Paper ID: 197	Finite Element Based Modelling of the Thermal Behaviour of Converter Transformers influenced by DC Bias Author(s): Suman Yadav (NERIST)*; Gourav Suman (NERIST); Ram Mehta (NERIST)
Paper ID: 211	Distribution System Congestion Management by Charging Coordination of Plug-in Electric Vehicle Author(s): Subhasish Deb (Mizoram University); Arup Kumar Goswami (NIT Silchar)*; Rahul Lamichane Chetri (NIT Silchar); Rajesh Roy (NIT Silchar)
Paper ID: 258	Torque and Temperature Prediction for Permanent Magnet Synchronous Motor Using Neural Networks Author(s): Kishore Bingi (VIT Vellore); B Rajanarayan Prusty (VIT Vellore)*; Aaditya Kumra (VIT Vellore); Anurag Chawla (VIT Vellore)
Paper ID: 260	Curve Fitting-Based Approximation of Fractional Differentiator with Complex Orders Author(s): Kishore Bingi (VIT Vellore); Abhaya Pal Singh (Symbiosis Institute of Technology, Symbiosis International, Pune); B Rajanarayan Prusty (VIT Vellore)*
Paper ID: 262	Study of Electromagnetic Forces on Windings of High Voltage Transformer during Short Circuit Fault Author(s): Suman Yadav (NERIST)*; Gourav Suman (NERIST); Ram Mehta (NERIST)

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Track-2

Clean Technologies

Technical Session (TS-05) Schedule

Day 1- Friday, 05th March 2021, Time: 04:00 - 05:30 PM

Session (Parallel)	Monitoring and Control of Distribution Power Network
Session Chair(s)	Chandan Kumar Chanda (IEST, Shibpur), Atanu Banerjee (NIT Meghalaya)
Paper ID: 33	Near Miss of Blackout in Southern Part of North Eastern Grid of India Author(s): Sourav Mandal* (POSOCO), V Suresh (POSOCO), Rajib Sutradhar (POSOCO), and Kritika Debnath (POSOCO)
Paper ID: 35	Design and Application of Converged Infrastructure through Virtualization Technology in Grid Operation Control Center in North Eastern Region of India Author(s): Tapobrata Paul (POSOCO)*, V Suresh (POSOCO), M K Ramesh (POSOCO), Sheikh Shadrudin (POSOCO), Anirban Bhattacharya (POSOCO) and Abrar Ahmad (POSOCO)
Paper ID: 154	Solution of Combined Heat and Power Economic Dispatch Problem Using Volleyball Premier League Algorithm Author(s): Deblina Maity (NSEC)*; Sumit Banerjee (Dr. B. C. Roy Engineering College); Chandan Kumar Chanda (IEST)
Paper ID: 173	Distributed Energy Trading Network: Decentralized and Secured Author(s): Sounak Bhowmik (IEST Shibpur)*; Milandeep Sarkar (IEST Shibpur); Dipanjan Bose (IEST Shibpur); Chandan Kumar Chanda (IEST Shibpur)
Paper ID: 184	Assessment of Resiliency by incorporating DGs in Power Network using Graph Theoretic Approach Author(s): Manikanchan Mandal (IEST Shibpur)*; Dipanjan Bose (IEST Shibpur); Chandan Kumar Chanda (IEST Shibpur)
Paper ID: 245	An Ultra-Fast Master-Slave ADALINE for Hybrid Active Power Filter including Photovoltaic System Author(s): Priyabrat Garanyak (IIIT Una)*; Kaibalya Prasad Panda (NIT Meghalaya); R.T. Naayagi (Newcastle University in Singapore); Gayadhar Panda (NIT Meghalaya)
Paper ID: 257	Reliable Prediction Intervals of PV Generation Using Quantile Regression Averaging Approach Author(s): Debesh S Tripathy (National Institute of Science and Technology); B Rajanarayan Prusty (VIT Vellore)*; Kishore Bingi (VIT Vellore)

Technical Session (TS-06) Schedule

Day 1- Friday, 05th March 2021, Time: 04:00 - 05:30 PM

Session (Parallel)	Power Quality Control for Renewable Energy Integration
Session Chair(s)	Ritula Thakur (NITTR Chandigarh), Sanjiba Kumar Bisoyi (JSSATE Noida)
Paper ID: 206	Nonlinear Disturbance Observer Based DC-Link Voltage Control for Grid-Connected VSC Author(s): Pritha Paitandy (IIT Delhi)*; Sukumar Mishra (IIT Delhi)
Paper ID: 218	Enhanced Power Quality Multi-Mode Grid Interactive PV-Battery System for Uninterrupted Power Author(s): Syed Bilal Qaiser Naqvi (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 220	An Asymmetrical Reduced Switch Multilevel Inverter based Grid-connected PV system Author(s): Madan Kumar Das (IIT Delhi)*; Sukumar Mishra (IIT Delhi); Kartick Chandra Jana (ISM Dhanbad); Parusharamulu Buduma (IIT Delhi)
Paper ID: 223	Inrush Current Minimization in Reduced Device Count Multilevel Inverter Interfacing PV System Author(s): Priyanka Sen (CVRGU)*; Vandana Jha (CVRGU); Ashwin Sahoo (CVRGU)
Paper ID: 224	Multi-Pulse Voltage Source PV Converter with STATCOM Capability for Large-Scale Solar Photovoltaic Plants Author(s): Subir Karmakar (IIT Delhi)*; Shivam Kumar Yadav (IIT Delhi); Bhim Singh (IIT Delhi)
Paper ID: 227	Power Extraction From an Ultra-Low Input Voltage Source in a Battery-less Thermoelectric Harvester Author(s): Dipak Bhapkar (IIT Kharagpur); Ashis Maity (IIT Kharagpur)*
Paper ID: 255	MRAS Based Sensorless PMSM Drive with Regenerative Braking For Solar PV-Battery Powered EV Author(s): Sumit Kumar (IIT Delhi)*; Bhim Singh (IIT Delhi); Sreejith R. (IIT Delhi)

Technical Session (TS-07) Schedule

Day 1- Friday, 05th March 2021, Time: 04:00 - 05:30 PM

Session (Parallel)	Renewable Energy Application in Electrical Vehicle and Water Pumping Systems
Session Chair(s)	Arup Kumar Goswami (NIT Silchar), Sanjoy Debbarma (NIT Meghalaya)
Paper ID: 23	Identification of Fault Area in the Distribution System Based on Rotor Angle Behavior of Diesel Generator Author(s): Sangamesh Y Goudappanavar (BEC Bagalkot)*; Suresh Jangamshetti (BEC Bagalkot); Jaijagadeesh O (BEC Bagalkot)
Paper ID: 42	Dynamic Management of Electric Vehicle Charging Station Author(s): Vartika Pandey (BIT Mesra Ranchi)*, Prem Prakash (BIT Mesra Ranchi)
Paper ID: 116	Design and Analysis of Electric bike Hub-Motor using Motor-CAD Author(s): Sandeep Kumar Chawrasia (IEST)*; Aakash Das (IEST); Chandan Kumar Chanda (IEST)
Paper ID: 161	Sensorless SRM driven Solar Irrigation Pump with Grid-Support Using Vienna Rectifier Author(s): Amarnath Yalavarthi (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 244	Residual Error Modelling based Hybrid Wavelet-ConvLSTM Deep Learning Model to Estimate SOC of EV Batteries Author(s): Utkarsh Kumar (IIT Delhi)*; Sukumar Mishra (IIT Delhi); Sreedhar Madichetty (IIT Delhi)
Paper ID: 249	Design and Development of Energy Efficient Induction Motor for Solar PV fed Submersible Water Pump Author(s): Rashmi Rai (IIT Delhi)*; Bhim Singh (IIT Delhi); Darshan Dudharejiya (Shakti Pumps); Chinmay Jain (Shakti Pumps); Manoj Modi (Shakti Pumps)
Paper ID: 256	Robust frequency control of hybrid power system with EV and HP Author(s): Debidasi Mohanty (VSSUT)*; Sidhartha Panda (VSSUT)

Technical Session (TS-08) Schedule

Day 1- Friday, 05th March 2021, Time: 04:00 - 05:30 PM

Session (Parallel)	Control and Optimal Power Management for Microgrid Operation
Session Chair(s)	Shubhrata Gupta (NIT Raipur), Supriyo Das (NIT Meghalaya)
Paper ID: 172	Seamless Operation of Master-Slave Organized AC Microgrid with Robust Control and Islanding Detection Author(s): Parusharamulu Buduma (IIT Delhi)*; Madan Kumar Das (IIT Delhi), R.T. Naayagi (Newcastle Univeristy), Sukumar Mishra (IIT Delhi); Gayadhar Panda (NIT Meghalaya)
Paper ID: 186	Design of ANFIS Controller for a DC Microgrid Author(s): Don Gamage (University of Auckland)*; Xibeng Zhang (University of Auckland); Abhisek Ukil (University of Auckland); Chathura Wanigasekara (University of Auckland); Akshya Swain (University of Auckland)
Paper ID: 193	Comparative Evaluation of Basic Probabilistic Load Flow Methods with Wind Power Integration Author(s): Vikas Singh (NITK Surathkal)*; Tukaram Moger (NITK Surathkal); Debashisha Jena (NITK Surathkal)
Paper ID: 236	Synchronization Control Based on Variable Fractional Delay Filter for Solar-PV-Battery System Author(s): Pavitra Shukl (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 261	HOMER Based Optimal Sizing of a PV/Diesel/Battery Hybrid System for a Laboratory Facility Author(s): Gourav Suman (NERIST)*; Suman Yadav (NERIST); Om Roy (NERIST)
Paper ID: 269	Adaptive Kernel Width fourth order Maximum Correntropy based VSC control of grid-tied PV-Battery System Author(s): Mukul Chankaya (NIT Srinagar)*; Ikhlq Hussain (Kashmir University); Aijaz Ahmad (NIT Srinagar)

Track-3

**Advanced Power Converters for
Renewable Energy Application**

Technical Session (TS-09) Schedule

Day 2- Saturday, 06th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Operation and Control of AC-DC Microgrid System
Session Chair(s)	K. Vaisakh (AU, Visakhapatnam), Puja Dash (GVPCE, Visakhapatnam)
Paper ID: 11	Control Strategy for Load Tracking and Voltage Control of a Grid Integrated Solar/Fuel Cell Hybrid Distribution System Author(s): Sumitha T L (The Oxford college of Engineering)*; Bansilal (NIE Institute of Technology); S. Sumathi (RNS Institute of Technology)
Paper ID: 113	Dynamic State Estimation of Multi-machine Power Network Integrated with SVC Author(s): Meera Karamta (PDPJ)*; Anilkumar Markana (PDPJ)
Paper ID: 169	Small-Hydro Battery Energy Storage System With Mode Transfer Capabilities Author(s): Shalvi Tyagi (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 182	Phasor Measurement Unit Placement Strategies Considering Measurement Redundancy Author(s): Thangavel S (NIT Puducherry), Yuvaraju Venkatachalam (NIT Puducherry)*
Paper ID: 198	Prediction of Electromechanical Oscillatory Parameters in Power Systems Using ANN Author(s): Nashida C (NIT Calicut)*; Rahul S (NIT Calicut); Sunitha R (NIT Calicut)
Paper ID: 208	Effect of CES on Load Frequency Control in Multiarea AC/DC Interconnected System Author(s): Sumana Das (Mizoram University)*; Subir Datta (Mizoram University); Lalit Chandra Saikia (NIT Silchar)
Paper ID: 288	Fault Detection in IEEE 9-Bus DC Microgrid System using Differential Current Method Author(s): Satyavarta Kumar Prince (NIT Meghalaya)*; Shaik Affijulla (NIT Meghalaya); Gayadhar panda (NIT Meghalaya)

Technical Session (TS-10) Schedule

Day 2- Saturday, 06th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Power Converters Modeling and Control
Session Chair(s)	Debjani Ganguly (IEST Shibpur), Priyabart Garnayak (IIIT Una)
Paper ID: 13	A High PFC AC-DC System for LED Using K Factor Control Driven by Synchronous Semi-Bridgeless Rectifier Author(s): Vinod Kumar Yadav (MNIT Jaipur)*; Dr. Arun Verma (MNIT Jaipur); Udaykumar R Yaragatti (MNIT Jaipur), Manikant Kumar (MNIT Jaipur)
Paper ID: 53	Multicarrier PWM Technique with Different Reference Signal for Performance Evaluation of a New Single Phase 5-Level Switched Capacitor Topology Author(s): Liju Shaji (MITS gwalior)*; Praveen Bansal (MITS gwalior); Vijay Bhuria (MITS gwalior)
Paper ID: 96	High PFC AC-DC System For LED With Observer Based Controller Author(s): Vinod Kumar Yadav (MNIT Jaipur)*; Arun Verma (MNIT Jaipur); Udaykumar R Yaragatti (MNIT Jaipur); Anil Jakhar (MNIT Jaipur)
Paper ID: 179	Design and FPGA Implementation of an Islanding Detection cum Re-Synchronization Technique for a Grid Connected Inverter in a DC Microgrid Author(s): Soumya Samanta (AEC)*; Subir Datta (Mizoram University); Satyajit Das (VIT Vellore); Binoy Krishna Roy (NIT Silchar); Amrita Ganguly (AEC)
Paper ID: 201	Novel 13-level Asymmetrical Photovoltaic Inverter with Reduced switches Author(s): Madan Kumar Das (IIT, Delhi)*, Parusharamulu Buduma (IIT Delhi); Kartick Chandra Jana (ISM Dhanbad); Sukumar Mishra (IIT Delhi)
Paper ID: 234	Single Phase Nine Level Switched Capacitor Based Grid Connected Inverter with LCL Filter Author(s): Aratipamula Bhanuchandar (NIT Warangal)*; Bhagwan K Murthy (NIT Warangal)
Paper ID: 290	Analysis and Control of Pseudo Quadratic Buck-Boost Converter Author(s): Malay Ranjan Khuntia (IIT Delhi); M. Veerachary (IIT Delhi)*

Technical Session (TS-11) Schedule

Day 2- Saturday, 06th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Control of Electrical Drives with Renewable Energy Integration
Session Chair(s)	Ranjan Kumar Behera (IIT Patna), Rakesh Roy (NIT Meghalaya)
Paper ID: 91	Modified Whale Optimisation Technique for Combined Objective of Speed Control and Torque Ripple reduction of SRM Drive Author(s): Nutan Saha (VSSUT, Burla)*, Sidhartha Panda (VSSUT, Burla), Dillip Ku. Sahoo (VSSUT, Burla)
Paper ID: 158	Solar Fed Cuk Converter Based SRM Drive Control of E-Rikshaw Author(s): Arjun Kumar (IIT, Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 190	Three-Level Inverters for Induction Motor Driven Electric Vehicles Author(s): Paramjeet Singh S Jamwal (SLIET)*; Sanjeev Singh (NIT Bhopal); Shailendra Jain (NIT Bhopal)
Paper ID: 246	Sliding Mode Observer based Sensorless Current Hysteresis Controller for PMLDLC Motor Drive Author(s): Prashant Kumar (IIT Dhanbad)*; Vijaya Bhaskar D (IIT Dhanbad); Ranjan Kumar Behera (IIT Patna)
Paper ID: 248	Sliding Mode Observer based Rotor Position Estimation with Field Oriented Control of PMLDLC Motor Drive Author(s): Prashant Kumar (IIT Dhanbad)*; Vijaya Bhaskar D (IIT Dhanbad); Ranjan Kumar Behera (IIT-Patna)
Paper ID: 253	Analysis of Flux Density in PMSM With Constant Mutual Flux Linkage Control Strategy Using FEM Model Author(s): Raja Gandhi (NIT Meghalaya)*; E Sankararao (NIT Meghalaya); Robin Wilson (NIT Meghalaya); Amit Kumar (NIT Meghalaya); Rakesh Roy (NIT Meghalaya)
Paper ID: 293	Low Power Sensorless PMLDLC Motor Drive with PFC for Domestic Flour Mill Author(s): Aryadip Sen (IIT Delhi)*; Saurabh Manglik (IIT Delhi); Bhim Singh (IIT Delhi); Bijaya Ketan Panigrahi (IIT Delhi)

Technical Session (TS-12) Schedule

Day 2- Saturday, 06th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Performance of Advanced Control Schemes for Microgrid Operation
Session Chair(s)	Shiva Kumar K (IIT Hyderabad), Satyabrata Sahoo (NMRIT Hyderabad)
Paper ID: 82	Control of DC Microgrid for Improved Current Sharing and Voltage Regulation Author(s): Rohit Kumar (NIT Uttarakhand)*; M. K. Pathak (IIT Roorkee)
Paper ID: 121	FOSMC Control Mechanism For Solar and Battery based Microgrid System Author(s): Satish Kumar Gudey (GVPCE)*; Silar Saheb Shaik (GVPCE)
Paper ID: 126	Real time simulation of Intelligently Optimized Controller for Frequency Regulation of an Islanded AC Microgrid: MBA-MBIMC Tuning Approach Author(s): Badal Kumar (NIT Manipur)*; Shuma Adhikari (NIT Manipur); Nidul Sinha (NIT Silchar)
Paper ID: 134	Multiple PV Arrays-Battery Based Microgrid Control Integrated to 3-Phase Distribution Network Author(s): Bhim Singh (IIT Delhi); Shubhra Shubhra (IIT Delhi)*
Paper ID:135	Nonconventional Energy Sources Based Microgrid with Seamless Transition Capabilities Author(s): Varsha Yadav (IIT)*; Seema Kewat (IIT Delhi); Bhim Singh (IIT Delhi); Arunima Verma (IIT)
Paper ID: 152	Seamless Transfer Strategy of a Wind-Battery Microgrid Between Grid Connected and Islanded Mode of Operation Author(s): Farheen Chishti (IIT DELHI)*; Bhim Singh (IIT Delhi)
Paper ID: 162	Robust Control Technique of Grid Synchronization of SPV based BES System for Power Quality Improvement Author(s): Sunaina Singh (KSVCEM, Bijnor)*; Seema Kewat (IIT Delhi); Bhim Singh (IIT Delhi); Bijaya Ketan Panigrahi (IIT Delhi)

Track-4

Advanced Control and Converters in Microgrid Systems

Technical Session (TS-13) Schedule

Day 2- Saturday, 06th March 2021, Time: 02:00 - 04:00 PM

Session (Parallel)	Power Quality Control of Interfacing Converters in Microgrid System
Session Chair(s)	Size Sing Lee (Newcastle University), Rangababu P (NIT Meghalaya)
Paper ID: 50	Experimental Validation of Improved Power Quality in Unidirectional Multipulse AC - DC Converters due to Higher Pulse Number Author(s): Arvindan A Narayanan (SSN College of Engineering)*
Paper ID: 68	Source Side Control Analysis of An AC Microgrid Fed with Hybrid Renewable Distributed Energy Sources Author(s): Akhyurna Swain (CET Bhubaneswar)*; Sarthak Swaroop Dash (CET Bhubaneswar); Satabdi Bastia (CET Bhubaneswar); Durgesh Prasad Bagarty (CET Bhubaneswar); Sribatsa Behera (CET Bhubaneswar)
Paper ID: 194	An Improved Three-Level DC-DC Boost Converter for Renewable energy systems with High Gain Author(s): Raghavendran S (SRM institute of Science and Technology)*; Sateesh kumar Kuncham (NIT Warangal); Abhilash Tirupathi (Career Launcher Edu. Ltd); Chittibabu B (IIITDM Kancheepuram)
Paper ID: 254	Optimal Switching Control of Series Custom Power Device for Voltage Quality Improvement Author(s): Ravi Kumar Majji (NIT Silchar)*; Jyoti Prakash Mishra (NIT Silchar); Ashish A Dongre (NIT Silchar)
Paper ID: 274	Reduced Switch Quadruple Boost Switched-Capacitor based Multilevel Inverter Author(s): Kaibalya Prasad Panda (NIT Meghalaya)*; Narendra Babu P (NIT Meghalaya); Sanjiba Kumar Bisoyi (JSSATE Noida); Gayadhar panda (NIT Meghalaya)
Paper ID: 275	Adaptive SOGI Gain Based Control of Single Phase Inverter Under Distorted Grid Condition Author(s): Kalyan Dash (IIT Delhi, Hauz Khas)*; Manas Ranjan Mishra (IIT Delhi); Sukumar Mishra (IIT Delhi)

Technical Session (TS-14) Schedule**Day 2- Saturday, 06th March 2021, Time: 02:00 - 04:00 PM**

Session (Parallel)	Power Converters for Renewable Energy Applications
Session Chair(s)	Anup Kumar Panda (NIT Rourkela), Parveen P Terang (JSSATE, Noida)
Paper ID: 112	Virtual Vector based DTC with CMV Reduction for Five-Phase Induction Motor Drive Author(s): Utkal Ranjan Muduli (IIT Patna)*; Bheemaiah Chikondra (IIT Patna); Ranjan Kumar Behera (IIT Patna)
Paper ID: 115	Coordinate Control of Grid-Side Energy Storage Power Station with Consideration of Communication Delays in Grid-Connected Micro-Grids Author(s): Feng Wei (SP Singapore)*; Xuebing Chen (NTU Singapore); Shuyu Cao (SIT Singapore); Chew Beng Soh (SIT Singapore); Zhiqiang Cai (SP Singapore); King Jet Tseng (SIT Singapore)
Paper ID: 130	Efficiency Comparison of Solid-State Transformer and Low-Frequency Power Transformer Author(s): Archit Joshi (IIT Guwahati)*; Shabari Nath (IIT Guwahati)
Paper ID: 204	A Hybrid Novel Cascaded Asymmetrical 21-level Inverter with Reduced Switches Author(s): Madan Kumar Das (IIT, Delhi); Sandeep Singh Chauhan (IIT Delhi)*; Parusharamulu Buduma (IIT Delhi), Kartick Chandra Jana (ISM Dhanbad); Sukumar Mishra (IIT Delhi)
Paper ID: 268	Three-Phase AC-DC Converter with Algorithm based Adaptive Direct Power Control Technique and Backstepping Controller Author(s): Amit Kumar (IIT DELHI)*; Sukumar Mishra (IIT Delhi)
Paper ID: 281	MSOGI-FLL based Robust Harmonics Compensation under Distorted Grid Voltage Condition Author(s): Alok Kumar Dubey (NIT Silchar)*; Jyoti Prakash Mishra (NIT Silchar); Amrutesh Kumar (NIT Silchar); Ashish A Dongre (NIT Silchar)

Technical Session (TS-15) Schedule

Day 2- Saturday, 06th March 2021, Time: 02:00 - 04:00 PM

Session (Parallel)	Control and Operation of Integrated Renewable Energy Sources and Storage Devices
Session Chair(s)	Mohamad Amin (NTNU, Norway), Smitha Joyce Pinto (MIT Mysore)
Paper ID: 37	Integration of STP and WTS in multi-area AGC Studies Considering GH A Optimized TIDF Controller Author(s): Sanjeev Kumar Bhagat (NIT Silchar); Lalit Chandra Saikia (NIT Silchar); Naladi Ram Babu (NIT Silchar)*; Satish Kumar Ramoji (NIT Silchar); Biswanath DekaRaja (NIT Silchar); Manoj Kumar Behera (NIT Silchar)
Paper ID: 38	Impact of Wind System and Redox Flow Batteries on LFC Studies under Deregulated Scenario Author(s): Naladi Ram Babu (NIT Silchar)*; Lalit Chandra Saikia (NIT Silchar); Sanjeev Kumar Bhagat (NIT Silchar); Satish Kumar Ramoji (NIT Silchar); Biswanath DekaRaja (NIT Silchar); Manoj Kumar Behera (NIT Silchar)
Paper ID: 52	Comparative analysis of different PV array configurations under Partial shading conditions Author(s): Smruti M Maharana (KIIT University)*; Alivarani Mohapatra (KIIT University); Chidurala Saiprakash (KIIT University); Abhinaba Kundu (KIIT University)
Paper ID: 88	Predictive Control with Fixed Switching Frequency for Three-Level Boost and NPC Converters Interfaced PMSG Wind Turbine Author(s): Kristiyan Milev (NAU Arizona); Faris Alshammari (NAU Arizona); Venkata Yaramasu (NAU Arizona)*; Mario Duran (University of Seville); Kishore Yadlapati (JNTU Narasaraopeta)
Paper ID: 127	Battery Energy Storage (BES) for Mitigation of Short-Term Power Fluctuations in Large-Scale Solar PV Plant Due to Cloud Movement Author(s): Subir Karmakar (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 132	Design and Simulate of Solar Photovoltaic Water Pumping System. Author(s): Krishna Kant (VNIT, Nagpur)*; Prakash S Kulkarni (VNIT, Nagpur)
Paper ID: 291	Neuro-Fuzzy Sliding Mode Control based Wide Area Power System Stabilizer for Transient Stability Improvement Author(s): Shiba Ranjan Paital (IIIT Bhubaneswar); Prakash K Ray (CET Bhubaneswar)*; Asit Mohanty (CET Bhubaneswar); Gayadhar panda (NIT Meghalaya)

Technical Session (TS-16) Schedule

Day 2- Saturday, 06th March 2021, Time: 02:00 - 04:00 PM

Session (Parallel)	Power Quality Improvement in Microgrid System
Session Chair(s)	Chittibabu B (IIITDM Kancheepuram), B Rajanarayan Prusty (VIT Vellore)
Paper ID: 17	UPQC based grid-connected photovoltaic system with Fuzzy Logic Controller Author(s): Maheswar Prasad Behera (IGIT Sarang)*; Omkar Tripathy (IGIT Sarang); Pravat Ray (NIT Rourkela)
Paper ID: 111	Design and Implementation of a Single-Band Hysteresis Current Controlled H-Bridge Inverter Author(s): Pradyumna Kumar Behera (NIT Rourkela)*; Anurag Satpathy (NIT Rourkela); Monalisa Pattnaik (NIT Rourkela);
Paper ID: 137	Power quality improvement in isolated microgrid using interleaved soft-switching boost converter with modulated three phase voltage source inverter Author(s): Sarthak Swaroop Dash (CET Bhubaneswar)*; Tanisha Pradhan (CET Bhubaneswar); Satabdi Bastia (CET Bhubaneswar); Gayadhar panda (NIT Meghalaya); Asit Mohanty (CET Bhubaneswar); Prakash K Ray (CET Bhubaneswar)
Paper ID: 167	A Novel Phase Locked Loop based Control Strategy for a Three-phase Grid-tied Solar PV System Author(s): Subham Kumar Jalan (Indian IIITDM Kancheepuram)*; Chitti Babu B (IIITDM Kancheepuram); Sridharan K (IIITDM Kancheepuram); Gayadhar Panda (NIT Meghalaya)
Paper ID: 178	Design and FPGA Implementation of a Deloading Control Technique for DC link voltage regulation of a PV System Author(s): Soumya Samanta (Assam Engineering College)*; Subir Datta (Mizoram University); Satyajit Das (VIT Vellore); Binoy Krishna Roy (NIT Silchar); Amrita Ganguly (Assam Engineering College)
Paper ID: 230	Intermixed Generalized Integrator based Grid-Friendly Inverter Control for Power Quality Enrichment in Microgrid System Applications Author(s): Narendra Babu P (NIT Meghalaya)*; Ritula Thakur (NITTTR); Sanjiba Kumar Bisoyi (JSSATE Noida); Rangababu Peesapati (NIT Meghalaya); Gayadhar Panda (NIT Meghalaya)

Track-5

Recent Advancements in Sustainable Energy Development

Technical Session (TS-17) Schedule

Day 3- Sunday, 07th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Micro/Nano Devices and Their Application in Health and Environmental Monitoring
Session Chair(s)	Priyanka Dwivedi (IIIT Sri City), Akhilendra Pratap Singh (NIT Meghalaya)
Paper ID: 15	Data Augmentation Enhanced Speaker Enrollment for Text-Dependent Speaker Verification Author(s): Achintya Kumar Sarkar (IIIT SriCity, Chittoor)*; Himansgshu Sarma (IIIT Sricity, Chittoor); Priyanka Dwivedi (IIIT Sri City); Zheng-Hua Tan (Aalborg University)
Paper ID: 39	An Accelerated Approach to Parallel Ensemble Techniques Targeting Healthcare and Environmental Applications Author(s): Tejasri Kari (BMSITM); Leelavani N (BMSITM); Sayeera Banu A (BMSITM); DhanuShree R (BMSITM); Jagannatha K.B (BMSITM); Santhi Natarajan (BMSITM)*
Paper ID: 43	Analysis and Performance of Machine Learning Algorithms on Disease Diagnosis Author(s): Sumathi M S (BMSIT&M)*; C Soujanya Joshi (BMSITM); Rithika Rose Thomas (BMSITM); Reethu G (BMSITM)
Paper ID: 80	Blockchain Based Smart Healthcare System for Chronic -Illness Patient Monitoring Author(s): Nihar Ranjan Pradhan (NIT Meghalaya)*; Siddhartha Suman Rout (Manav Rachna International Institute of Research and Studies); Akhilendra Pratap Singh (NIT Meghalaya)
Paper ID: 140	Investigation of Uniform and Non-Uniform Water Droplets on Different Configurations of Silicon Rubber Composite Insulators Subjected to AC Electric Field Stress Author(s): Mithun Mondal (BITS Hyderabad)*; H. P. Shrimathi (BITS Hyderabad)
Paper ID: 284	Modeling of Predictable Variations in Multi-Time Instant Ambient Temperature Time Series Author(s): Udith Shyamsukha (VIT Vellore); Nimish Jain (VIT Vellore); Tirthankar Chakraborty (VIT Vellore); B Rajanarayan Prusty (VIT Vellore)*; Kishore Bingi (VIT Vellore)

Technical Session (TS-18) Schedule

Day 3- Sunday, 07th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Signal Processing & Communication Technologies for Sustainable Energy
Session Chair(s)	Iti Saha Mishra (JU Kolkata), Ch. V. Ramarao (NIT Meghalaya)
Paper ID: 67	Sustainable building design based on glazing and location: A statistical modeling approach Author(s): Veena Mathew (M.I.T Manipal)*; Ciji Pearl Kurian (M.I.T Manipal); Aravind Babu (M.I.T Manipal)
Paper ID: 114	Power Swing and Fault Detection of Transmission Lines By Implementing Different Wavelets Author(s): Sonali M Akolkar (LOGMIEER), Hitesh R Jariwala (SVNIT)
Paper ID: 125	Path Planning of Mobile Robots Using Enhanced Particle Swarm Optimization Author(s): Bunil K Balabantaray (NIT Meghalaya)*; Kousik Sarkar (NIT Meghalaya); Alok Chakrabarty (NIT Meghalaya); Bibhuti Bhusan Biswal (NIT Meghalaya); Biswajit Mohanty (NIT Meghalaya)
Paper ID: 131	Copy-Move Image Forgery detection via Combined Pseudo-Zernike Moment Invariant Author(s): Raimoni Hansda (NIT Meghalaya); Rajashree Nayak (NIT Meghalaya)*; Bunil K Balabantaray (NIT Meghalaya)
Paper ID: 241	A Chaotic System with Large Lyapunov Exponent: Nonlinear Observer Design and Circuit Implementation Author(s): Piyush Pratap Singh (NIT Meghalaya)*
Paper ID: 286	Gradient based Optimal State Feedback control design for Feedback linearizable Nonlinear Nonaffine system Author(s): Kavyasree Raj S (NIT Calicut)*; Shihabudheen K V (NIT Calicut)
Paper ID: 287	Review of Factors Affecting Current Sharing and Techniques for Current Balancing in Paralleled Wide Bandgap Devices Author(s): Gaurav Yadav (IIT Delhi)*; Soumya Shubhra Nag (IIT Delhi)

Technical Session (TS-19) Schedule

Day 3- Sunday, 07th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Recent Trends and Innovation in Power Electronic Circuits and Systems for Clean Energy Integration
Session Chair(s)	R.T. Naayagi (Newcastle University), Gayadhar Panda (NIT Meghalaya)
Paper ID: 28	Impedance Source Inverter Wind Turbine and DC Collection System: Fault Ride-Through Analysis Author(s): Muhammad Ramadan B. M. S. (Newcastle University)*; R. T. Naayagi (Newcastle University)
Paper ID: 30	Development and Implementation of an Adaptive Overcurrent Protection Algorithm for a Modern Power Distribution Network Author(s): Chathurika S.K. Chandraratne (Newcastle University in Singapore)*; R. T. Naayagi (Newcastle University); Gayadhar Panda (NIT Meghalaya)
Paper ID: 31	Design of EMI Filter for Switched Mode Power supply Author(s): R. T. Naayagi (Newcastle University)*; Shuyu Cao (Singapore Institute of Technological); Hirzi Darajit (Singapore Institute of Technology)
Paper ID: 93	Wireless Charging Resonant Converter Topology Study Based On Analytical Design Computation Author(s): Shuyu Cao (Singapore Institute of Technological)*; Htet Ye Yint Naing (Singapore Institute of Technology); R. T. Naayagi (Newcastle University); Sze Sing Lee (Newcastle University); Feng Wei (Singapore Polytechnic); King Jet Tseng (Singapore Institute of Technology)
Paper ID: 117	Sensorless BLDCM Ceiling Fan using a Single Switch and Single Stage PFC Converter Author(s): Amit Kumar (IIT Delhi)*; Bhim Singh (IIT Delhi)
Paper ID: 141	Frequency Stability Enhancement of Thermal Power Plant-Integrated Microgrid with Virtual Inertia Emulation Author(s): Bharath Maddila (NIT Meghalaya)*; Narendra Babu P (NIT Meghalaya); Gayadhar Panda (NIT Meghalaya)
Paper ID: 213	Power Quality Enhancement in PV and Battery Storage Based Microgrid Using Hybrid Active Filter Author(s): Soumya Das (IIIT Bhubaneswar); Prakash K. Ray (CET Bhubaneswar)*; Asit Mohanty (CET Bhubaneswar); Gayadhar Panda (NIT Meghalaya)

Technical Session (TS-20) Schedule

Day 3- Sunday, 07th March 2021, Time: 11:00 - 01:00 PM

Session (Parallel)	Sustainable Energy Technologies for Rural & Remote Places
Session Chair(s)	Prabodh Bajpai (IIT Kharagpur), Piyush Pratap Singh (NIT Meghalaya)
Paper ID: 47	Design and Development of Valveless Pulsejet Engine Author(s): Shivang Umeshbhai Modi (Silver Oak CET)*; Sahil Khinchi (Silver Oak CET); Nirmal Rajpurohit (Silver Oak CET); Ankit Rami (Silver Oak CET); Sathish D (Silver Oak CET)
Paper ID: 63	High Performance Novel Network on chip Interconnect for Neuromorphic Architectures Author(s): Jayshree (NIT Nagaland); Gopalakrishnan Seetharaman (IIIT Tiruchirappalli)*; Debadatta Pati (NIT Nagaland)
Paper ID: 69	Performance Assessment of SPV Powered DC Irrigation Pumps with Solar Tracking Mechanism Author(s): Dr. Basanagouda F Ronad (BEC Bagalkot)*
Paper ID: 94	Design Optimization Analysis Based On Demand Side Management of a Stand-alone Hybrid Power System Using Genetic Algorithm for Remote Rural Electrification Author(s): Arbogast Nyandwi (Marwadi University)*; Anurag Gupta (Marwadi University); Dinesh Kumar (Marwadi University); Amit Ved (Marwadi University)
Paper ID: 100	Evolutionary Quantum Transition (EQUATe): A Novel Solution to Optimization Problems Author(s): Anand Ravishankar (BMSITM)*; Santhi Natarajan (BMSITM); Bharathi Malakreddy A (BMSITM)
Paper ID: 195	Assessment of Thermo-Physical Properties of Mineral Oil-Based Nanofluids for Enhancing Cooling Functionality of oils used in Transformers Author(s): Suhaib Ahmad Khan (Aligarh Muslim University)*; Asfar Khan (Aligarh Muslim University); Mohd Tariq (AMU Aligarh)
Paper ID: 259	Design and Analysis of Fractional Filters with Complex Orders Author(s): Kishore Bingi (VIT Vellore); P. Arun Mozhi Devan (UTP); B Rajanarayan Prusty (VIT Vellore)*