## Schedule of Technical Sessions and Tutorials

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### Keynotes and Tutorials

- **Tutorial 1**: Prof. H M Suryavanshi, VNIT Nagpur
- **Tutorial 2**: Prof. Pramod Agrawal, IIT Roorkee

### Keynotes and Resource Person

- **KN-1**: Dr. Dinesh Kumar, Danfoss Drives, Denmark
- **KN-2**: Prof. Anurag Srivastava, West Virginia University
- **KN-3**: Prof. Vinod Khadkikar, Khalifa University, UAE
- **KN-4**: Prof. Biplab Sikdar, National University of Singapore
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**TS_TE1-20th December 2021 (10:30-11:45 AM)**

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| **50** | **Title:** Vehicle to Grid (V2G): Booster for EV adaptation in India  
Authors: Ishwari Tank (ARAI Academy); Vignesh S (ARAI Academy); Yogesh Krishan Bhateshvar (ARAI Academy); Kamal Vora (Automotive Research Association of India (ARAI)) |
| **87** | **Title:** Plug-in Electric Vehicle’s State-of Charge Prediction by Random Forest based Bayesian Optimization for Coordination Strategy in Distribution System Congestion Management  
Authors: Subhasish Deb (Mizoram University); Arup Kumar Goswami (National Institute of Technology, Silchar); Rahul Lamichane Chetri (National Institute of Technology Silchar); Rajesh Roy (National Institute of Technology Silchar) |
| **88** | **Title:** Modelling of Three Port DC/DC Converter for Electric Vehicle Charging Station  
Authors: Akhilesh K Tiwari (NIT Raipur); Swagatika Mishra (National Institute of technology, raipur) |
| **111** | **Title:** Cost Benefit Analysis of EV Charging Scheduling under Stochastic Framework Considering PV and Battery Energy Storage  
Authors: Arnab Pal (NIT Agartala); Sourav Das (NIT Durgapur); Ajoy Kumar Chakraborty (NIT Agartala); Parimal Acharjee (NIT Durgapur); Aniruddha Bhattacharya (NIT Durgapur) |
| **117** | **Title:** Miniaturization of Filter Circuit Using an Inductor and Capacitors Composite Element  
Authors: Masato Tanaka, Kazuhiro Shimura; Mitsuhide Sato, Tsutomu Mizuno (Shinshu University); Takashi Matsuoka (Nippon Chemi-Con Corp.) |
| **118** | **Title:** Performance Analysis of onboard GaN-based Synchronous Rectifier used in Dynamic Wireless Charging System for Electric Vehicle  
Authors: Dr. Kundan Kumar (NIT Manipur) |
| **123** | **Title:** A Two-Stage Interleaved Bridgeless PFC based On-Board Charger for 48V EV Applications  
Authors: G K Naveen Kumar (MNIT Jaipur); Dr. Arun Verma (MNIT Jaipur) |
| **129** | **Title:** Harmonic Modeling and Performance Analysis of the Basic IPT Topologies under Varying Operating Conditions  
Authors: Jalaj Kumar (IIT Kanpur); Suvendu Samanta (IIT Kanpur) |
| **185** | **Title:** A Bidirectional On-Board Charging System for LEVs  
Authors: Jitendra Gupta (IIT Delhi); Bhim Singh (Indian Institute of Technology Delhi) |
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Title: Comparison of two configurations of Line Start PM Motors for e-Vehicles  
Authors: Ankita Dwivedi (Chouksey Engineering College); Ritu Sharma (CEC, Bilaspur); Raja Ram Kumar (Jorhat Engineering College) |
| | **98**  
Title: LC Input Filter Passive Damping Improvement for Traction Drive Application  
Authors: Kaspars Kroics (Riga Technical University)*; Kaspars Kroics (Riga Technical University) |
| | **141**  
Title: Full Range Soft-Switching for On-board EV Charger using Multi-classification Algorithm  
Authors: Manaswi Srivastava (TIET Thapar University)*; Tanu Wadhera (Thapar Institute of Engineering and Technology, Patiala); Dr. Arun Verma (MNIT Jaipur) |
| | **168**  
Title: A Bidirectional Charger for Light Electric Vehicle Using Coupled-Inductor based High Gain SEPIC Converter  
Authors: Utsav Sharma (IIT Delhi)*; Bhim Singh (Indian Institute of Technology Delhi) |
| | **196**  
Title: Design and analysis of Frequency modulated DAB-MSPRC for V2G and G2V Applications  
Authors: Merlin Mary N J (NIT Trichy)*; Dr. Shelas Sathyan (NIT, Trichy); Hiralal Suryawanshi (VNIT) |
| | **228**  
Title: A Generalized Technique to Eliminate DC Bias Imbalance in Primary and Secondary Currents of HF Transformer during Power Reference Mutation Event  
Authors: Saran Chaurasiya (IIT Delhi)*; Bhim Singh (IIT Delhi) |
| | **234**  
Title: Design and Simulation of Efficient Power Converters for Vehicle to Grid Applications  
Authors: Laith Kanaan (Qatar University)* |
| | **237**  
Title: Analysis of Output Power Variation in Dynamic Wireless Charging System for Electric Vehicle  
Authors: Dr. Kundan Kumar (NIT Manipur, Imphal)*; Kantipudi V V S R Chowdary (KIIT); Vima P Mali (Pandit Deendayal Petroleum University); Raja Ram Kumar (IIT (BHU), Varanasi) |
| | **264**  
Title: SPV-SHEC-BES Based Charging Infrastructure  
Authors: Shalvi Tyagi Bhim Singh (IIT Delhi) |
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**Title:** Performance of Solar Water Pump based on High Gain Zeta Converter and Battery Storage System  
Authors: Teena Jacob (Rajiv Gandhi Institute of Technology, Kottayam)*; Peter K Abraham (Rajiv Gandhi Institute of Technology Kottayam); Jose Titus (RIT Kottayam) |
| | **16**  
**Title:** Energy Storage-less Single Phase Photovoltaic Supply System Operating in Grid and Autonomous Modes  
Authors: Pemendra Kumar Pardhi (SGSITS Indore)*; Shailendra Sharma (Shri Govindram Seksaria Institute of Technology and Science, Indore) |
| | **21**  
**Title:** Dual Mode Operation of PV-BES Based Microgrid with Seamless Transition Capability  
Authors: Pavitra Shukla (IIT DELHI)*; Bhim Singh (Indian Institute of Technology Delhi) |
| | **23**  
**Title:** IHO-FLL Control for Seamless Transfer Between Operational Modes of AC Microgrid With DG Set as Emergency Power Supply  
Authors: Farheen Chishti (IIT DELHI)*; Bhim Singh (Indian Institute of Technology Delhi) |
| | **39**  
**Title:** Feasibility analysis of Floating Solar Photovoltaic Plant at Srisailam in Andhra Pradesh (India)  
Authors: Gangavarapu Mamatha*; Prakash S Kulkarni (VNIT) |
| | **59**  
**Title:** Optimization of grid-connected hybrid energy system using differential evolution  
Title: Deeksha Rajoria (MITS, Gwalior) |
| | **62**  
**Title:** Design and Development of Cost-Effective Solar PV Based DC Microgrid for Rural Applications  
Author: Snehal P Gawande*; Nischal Battulwar; Ankit Raut, Praveen Meshram (Yeshwantrao Chavan College of Engineering) |
| | **65**  
**Title:** Control of PV-BES Fed Sensorless PMSM Driven Water Pump With BES Deep Discharge Protection  
Author: Mohd Kashif *; Bhim Singh (IIT Delhi) |
| | **71**  
**Title:** Comparison of Deadzone and Vanderpol Oscillator Controlled Voltage Source Inverters in Islanded Microgrid  
Author: Vikash Gurugubelli*; Arnab Ghosh, Anup Kumar Panda (NIT Rourkela) |
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Author: Ozan Gulbudak (Karabuk University)*; Mustafa G?Kda (Karabuk University) |
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**Title:** Automated PAR for Additional Photosynthesis in PV Based Protective Environment Controlled Farming Systems  
Author: Anuradha Tomar (Netaji Subhas University of Technology) |
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**Title:** Controller Hardware in Loop Simulation (C-HIL) for Grid-Connected Photovoltaic System  
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Author: Srinivas Yelisetti*; Rajesh Kumar; Ravita Lamba (MNIT, Jaipur); Akash Saxena (SKIT Jaipur)) |
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**Title:** A Cooperative Irrigation Based PV Water Pumping System with Enhanced PV Utilization  
Author: Anuradha Tomar (Netaji Subhas University of Technology) |
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**Title:** AC Side Controller for Grid Connected Hybrid Renewable Energy Sources  
Author: Tatikayala Vinay Kumar*; Dr Shishir Dixit (MITS Gwalior) |
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**Title:** Day-Ahead Solar Generation Prediction from Weather Forecasts in the UK Using LSR-Fuzzy-Markov Chain  
Author: Mohammad Dr Monfared*; Meghdad Fazeli; Richard Lewis; Justin Searle (Swansea University) |
| 127  
**Title:** Trip Chain Information Model Based Stochastic Energy Management System for Microgrid  
Author: Sumit kumar K Rثار*; D. Saxena (MNIT, Jaipur) |
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Author: Sarvesh A Wakode*; Shrawan Kumar, Makarand Ballal (VNIT, Nagpur) |
| **143** | **Title:** Impact of Soiling on Bifacial PV Module Performance  
Author: Gautam Raina, Harsh Kumar; Shubham Sharma, Sunanda Sinha (MNIT)* |
| **145** | **Title:** Integration of PHP-SPV-BES Based Renewable Energy Sources with Dual Mode Operation  
Author: Kripa Tiwari *; Bhim Singh (IIT Delhi) |
| **170** | **Title:** Control of SPV-BES-SyRG Wind Based Microgrid  
Author: Gaurav Modi*; Bhim Singh (IIT Delhi) |
| **171** | **Title:** Optimal Power Scheduling of Hybrid Power System  
Author: Prerna Kuntal (MNIT Jaipur)*; Akhilesh Mathur (MNIT Jaipur) |
| **173** | **Title:** Topological Analysis and Solar Grid-Tied Integration of Level Building Network Based Extendable High Power Multilevel Converter  
Author: Shivam Kumar Yadav*; Bhim Singh (IIT DELHI) |
| **177** | **Title:** An Adaptive Control Algorithm for Seamless Mode Shifting Operation in Wind–Solar AC/DC Microgrid  
Author: Souvik Das*; Bhim Singh (IIT Delhi) |
| **178** | **Title:** Analysis of Synchronverter Control with Virtual Impedance During Grid Voltage Variations  
Author: Hariharan R*; Mahesh K. Mishra (IIT Madras)) |
| **179** | **Title:** An Improved Synchronverter Control for DERs Under Grid Voltage Variations  
Author: Hariharan R*; Mahesh K. Mishra (IIT Madras) |
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Author: Vivek Narayanan (IIT Delhi)*; Bhim Singh (IIT Delhi) |
| **198** | **Title:** A Hybrid MPPT Algorithm for Solar PV Water Pumping Systems  
Author: Dr. Sachin Jain (NIT, Raipur)*; S V S Phani Kumar K Ch (NIT Raipur); Aditya Keskar (NIT, Raipur); Dr. Jeremiah Johnson (NC State University, Raleigh, USA); Dr. Subhojit Ghosh (NIT, Raipur); Dr. R N Patel (NIT, Raipur) |
| **201** | **Title:** A Novel Transformer-Less Topology of Multiple Input DC-DC Converter with Less Component Count for Photovoltaic Applications  
Author: C.H.Kamesh Rao (NIT Raipur) |
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Author: Munesh Kumar Singh (IIT Delhi)*; Bhim Singh (IIT Delhi) |
| | **207** | **Title:** AGI-FLL Control for Pico-Hydro Based Microgrid with Seamless Connection to Utility/DG Set  
Author: Rohini Sharma (IIT Delhi)*; Bhim Singh (IIT Delhi) |
| | **224** | **Title:** Efficient Solar Water Pumping System With Adaptive Step Size Maximum Power-Point Tracking And BLDC Motor Control  
Author: Nitish Verma*; Dr. Arun Verma (MNIT Jaipur) |
| | **227** | **Title:** PV-Battery fed Two-Stage Non-isolated Buck-Boost Converter for Low-voltage DC-Microgrid  
Author: Yugal Kishor*; Dr. R N Patel (NIT, Raipur) |
| | **240** | **Title:** Hybrid operational approach for PV/DG microgrid without storage device  
Author: Prashant Malik (NIT Hamirpur)*; Mamta Awasthi (NIT Hamirpur); Kishan Aggrawal (Holmium technologies Pvt. Ltd.); Sunanda Sinha (MNIT) |
| | **248** | **Title:** Real-Time Digital Twin of Residential Energy Storage System for Cyber-Security Study  
Author: Amardeep B Shitole (Singapore University of Technology and Design)*; Nandha Kumar Kandasamy (Singapore University of Technology and Design); Lin Shen Liew (Singapore University of Technology and Design); Lewin Sim (Singapore University of Technology and Design); Anh Khoa Bui (Panasonic R&D Centre, Singapore) |
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Author: Aakriti Gupta (IIT Roorkee)*; K. K. Prabhakaran (IIT Roorkee); Thanga Raj Chelliah (IIT Roorkee) |
| **57** | **Title:** Bandwidth and On-time Jitter Improvement in a Peak Current-Mode Buck Converter  
Author: Yuechuan Yu (Maxim Integrated Products, INC.)* |
| **81** | **Title:** Fulfillment of CIGRE WG 36-05, EN 50160 by Applying SHM-PAM Scheme Using 7-level CHB Multilevel Inverter  
Author: Sourabh Kundu (NIT Durgapur)*; Subrata Banerjee (NIT Durgapur) |
| **113** | **Title:** Performance analysis of modular CHB MLI and conventional three-phase inverter for three-phase Induction motor application  
Author: Sathyavani Bandela (SR University)* |
| **134** | **Title:** Stability Analysis and Efficiency Improvement in a Multi-Converter System using Weighted Optimization Technique  
Author: Rashmi K Patel (Sardar Vallabhbhai National Institute of Technology, Surat)*; R Chudamani (Sardar Vallabhbhai National Institute of Technology) |
| **158** | **Title:** Energy Efficiency and Productivity Improvement of Induction Furnace by Tracking Power Efficiency  
Author: Devidas M Choudhary (Gujarat Technological University) |
| **218** | **Title:** A High-Gain Single-Switch DC-DC Converter Based Speed Control Of PMBLDCM Drive For EV Applications  
Author: Ujjwal Kalla (MANIT, Bhopal)*; Shiv Pratap Singh Rajawat (MANIT, Bhopal); Sanjeev Singh Chauhan (MANIT Bhopal); Nikhil Bhati (Government Engineering College Bikaner) |
| **301** | **Title:** Position and Speed Estimation of Syn-Rel Motor Drive Employing Sliding Mode Observer for Solar Assisted Electric Vehicle  
Author: Saurabh Mishra (IIT Delhi)*; Anshul Varshney (IIT Delhi); Bhim Singh (IIT Delhi) |
| **261** | **Title:** Analysis of Considering Dynamic Cross Saturation in Mathematical Model of a Symmetrical Six-Phase Self-Excited Induction Generator  
Author: Mohd Rizwan Khan (Aligarh Muslim University, Aligarh); Mohd. Faisal Khan (Aligarh Muslim University); Mohd Sartaj (Aligarh Muslim University, Aligarh)* |
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<td><strong>202</strong>&lt;br&gt;<strong>Title:</strong> Control of voltage source converter using Fractional order methodology&lt;br&gt;<strong>Author:</strong> Vinay Kumar Singh (IIT Roorkee)</td>
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<td><strong>206</strong>&lt;br&gt;<strong>Title:</strong> High Gain Switched Inductor-Capacitor Split Source Inverter&lt;br&gt;<strong>Author:</strong> Remya K P (GEC Thrissur)*; Dr Jaison Mathew (GEC Thrissur); Nandana V S (Government Engineering College Thrissur)</td>
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<td><strong>211</strong>&lt;br&gt;<strong>Title:</strong> Single Phase Power Quality Improved EV Charger using Zeta Function based Converter&lt;br&gt;<strong>Author:</strong> Nikhil Bhati (Government Engineering College Bikaner); Ujjwal Kalla (MANIT, Bhopal)*</td>
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<td><strong>219</strong>&lt;br&gt;<strong>Title:</strong> A Scheme for Voltage Regulation and Power Balance in Single Phase Asynchronous Generator based Wind Energy Systems&lt;br&gt;<strong>Author:</strong> Praveen Kumar (Govt. Engineering College Bikaner); Ujjwal Kalla (MANIT, Bhopal)</td>
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<td><strong>235</strong>&lt;br&gt;<strong>Title:</strong> Performance Assessment of SiC Switch based DC-DC Boost Converters For Solar PV Applications&lt;br&gt;<strong>Author:</strong> Ujjwal Kalla (MANIT, Bhopal)*; Kusum Lata Agarwal (ABES-Engineering College, India)</td>
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<td><strong>215</strong>&lt;br&gt;Title: An HG-SEPIC Converter Fed PMBLDC Motor Drive System&lt;br&gt;Author: Ujjwal Kalla (MANIT, Bhopal); Sangharsh Meshram (MANIT, Bhopal), Nikhil Bhati (Government Engineering College Bikaner)</td>
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