## Conference Schedule

### 19th-22nd December 2021

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<tr>
<td><strong>Date/Time</strong></td>
<td><strong>09:15-10:15</strong></td>
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### Technical Sessions

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<td>Transportation Electrification and Automotive Technologies</td>
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<td>Tutorial 1</td>
<td>Prof. H M Suryavanshi, VNIT Nagpur</td>
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<td>Renewable Energy and Energy Storage Systems</td>
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<td>Tutorial 2</td>
<td>Prof. Pramod Agrawal, IIT Roorkee</td>
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<td>Electrical Machines and Industrial Drives Power Electronic Converters</td>
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<td>Prof. Biplab Sikdar, National University of Singapore</td>
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<td>Power Systems and Smart Grids</td>
<td>TS_PS</td>
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<td>Control Systems and Applications</td>
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<td>Prof. Vinod Khadkikar, Khalifa University, UAE</td>
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<td>Machine Learning &amp; Signal Processing for Power &amp; Energy Applications + Semiconductor Devices and Circuits + Artificial Intelligence and Neural Networks + Image Processing</td>
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## Technical Session Details

### TS_TE1

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| 50             | **Title:** Vehicle to Grid (V2G): Booster for EV adaptation in India  
Author(s): 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  
Author(s): 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  
Author(s): 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  
Author(s): 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  
Author(s): 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  
Author(s): Dr. Kundan Kumar (NIT Manipur) |
| 123            | **Title:** A Two-Stage Interleaved Bridgeless PFC based On-Board Charger for 48V EV Applications  
Author(s): 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  
Author(s): Jalaj Kumar (IIT Kanpur); Suvendu Samanta (IIT Kanpur) |
| 185            | **Title:** Full Range Soft-Switching for On-board EV Charger using Multi-classification Algorithm  
Author(s): Jitendra Gupta (IIT Delhi); Bhim Singh (Indian Institute of Technology Delhi) |
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| **8**          | **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 (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) |
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<td><strong>Title</strong>: Energy Storage-less Single Phase Photovoltaic Supply System Operating in Grid and Autonomous Modes&lt;br&gt;Authors: Pemendra Kumar Pardhi (SGSITS Indore)*; Shailendra Sharma (Shri Govindram Seksaria Institute of Technology and Science, Indore)</td>
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<td><strong>Title</strong>: Dual Mode Operation of PV-BES Based Microgrid with Seamless Transition Capability&lt;br&gt;Authors: Pavitra Shukla (IIT DELHI)*; Bhim Singh (Indian Institute of Technology Delhi)</td>
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<td><strong>Title</strong>: IHO-FLL Control for Seamless Transfer Between Operational Modes of AC Microgrid With DG Set as Emergency Power Supply&lt;br&gt;Authors: Farheen Chishti (IIT DELHI)*; Bhim Singh (Indian Institute of Technology Delhi)</td>
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<td><strong>Title</strong>: Feasibility analysis of Floating Solar Photovoltaic Plant at Srisailam in Andhra Pradesh (India)&lt;br&gt;Authors: Gangavarapu Mamatha*; Prakash S Kulkarni (VNIT)</td>
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<td><strong>Title</strong>: Optimization of grid-connected hybrid energy system using differential evolution&lt;br&gt;Title: Deeksha Rajoria (MITS, Gwalior)</td>
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<td><strong>Title</strong>: Design and Development of Cost-Effective Solar PV Based DC Microgrid for Rural Applications&lt;br&gt;Author: Snehal P Gawande*; Nischal Battulwar; Ankit Raut, Praveen Meshram (Yeshwantrao Chavan College of Engineering)</td>
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<td><strong>Title</strong>: Control of PV-BES Fed Sensorless PMSM Driven Water Pump With BES Deep Discharge Protection&lt;br&gt;Author: Mohd Kashif *; Bhim Singh (IIT Delhi)</td>
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<td><strong>Title</strong>: Comparison of Deadzone and Vanderpol Oscillator Controlled Voltage Source Inverters in Islanded Microgrid&lt;br&gt;Author: Vikash Gurugubelli*; Arnab Ghosh, Anup Kumar Panda (NIT Rourkela)</td>
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Author: Ozan Gulbudak (Karabuk University)*; Mustafa G’Kda (Karabuk University) |
| 82             | **Title:** Automated PAR for Additional Photosynthesis in PV Based Protective Environment Controlled Farming Systems  
Author: Anuradha Tomar (Netaji Subhas University of Technology) |
| 84             | **Title:** Controller Hardware in Loop Simulation (C-HIL) for Grid-Connected Photovoltaic System  
Author: Sudhanshu Maurya, Suyash Binod*; Aayush Srivastava, Abhishek Baluni (JSS Academy Of Technical Education); Sudipto Poddar; Lini Mathew (National Institute of Technical Teachers Training Research Education) |
| 85             | **Title:** Comparative Performance Analysis on Passive and Active Balancing of Lithium-Ion Battery Cells  
Author: Rushali R Thakkar (Sardar Patel Institute of Technology) |
| 94             | **Title:** Modelling and Simulation of Home Energy Management System with Occupants Comfort  
Author: Srinivas Yelisetti*; Rajesh Kumar; Ravita Lamba (MNIT, Jaipur); Akash Saxena (SKIT Jaipur) |
| 97             | **Title:** A Cooperative Irrigation Based PV Water Pumping System with Enhanced PV Utilization  
Author: Anuradha Tomar (Netaji Subhas University of Technology) |
| 102            | **Title:** AC Side Controller for Grid Connected Hybrid Renewable Energy Sources  
Author: Tatikayala Vinay Kumar*; Dr Shishir Dixit (MITS Gwalior) |
| 124            | **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 Rathor*; D. Saxena (MNIT, Jaipur) |
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| **Title:** A Flexible Protection Approach for DC Microgrid Using Wavelet based Machine Learning Technique  
  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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<td><strong>Title:</strong> A Switched Reluctance Generator Based WEGS and a Bidirectional DC-DC Converter Interfaced BES Microgrid with Uninterrupted Power&lt;br&gt;<strong>Author:</strong> Vivek Narayanan (IIT Delhi)*; Bhim Singh (IIT Delhi)</td>
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<td><strong>Title:</strong> A Hybrid MPPT Algorithm for Solar PV Water Pumping Systems&lt;br&gt;<strong>Author:</strong> 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)</td>
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<td><strong>Title:</strong> A Novel Transformer-Less Topology of Multiple Input DC-DC Converter with Less Component Count for Photovoltaic Applications&lt;br&gt;<strong>Author:</strong> C.H.Kamesh Rao (NIT Raipur)</td>
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<td><strong>Title:</strong> Adaptive Energy Shaping Control of Buck Converter feeding CPL in DC Micro-Grid System&lt;br&gt;<strong>Author:</strong> Munesh Kumar Singh (IIT Delhi)*; Bhim Singh (IIT Delhi)</td>
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<td><strong>Title:</strong> Controlled Power Flow PV-BES System with Power Quality Improvement at Weak Grid by Generalized Integrator Based&lt;br&gt;<strong>Author:</strong> Yugal Kishor *; Dr. R N Patel (NIT, Raipur)</td>
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<td><strong>Title:</strong> Hybrid operational approach for PV/DG microgrid without storage device&lt;br&gt;<strong>Author:</strong> Prashant Malik (NIT Hamirpur)*; Mamta Awasthi (NIT Hamirpur); Kishan Aggrawal (Holmium technologies Pvt. Ltd.); Sunanda Sinha (MNIT)</td>
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<td><strong>Title:</strong> Real-Time Digital Twin of Residential Energy Storage System for Cyber-Security Study&lt;br&gt;<strong>Author:</strong> 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&amp;D Centre, Singapore)</td>
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Author: Yashi Singh (IIT Delhi)*; Bhim Singh (IIT Delhi); Sukumar Mishra (IIT Delhi) |
| **262**       | **Title**: Standalone Pico-Hydro Battery Integrated Universal Power Active Filter for PQ Improvement  
Author: Sanjenbam Chandraakala Devi (IIT Delhi)*; Priyank Shah (IIT Delhi), Bhim Singh (IIT Delhi) |
| **263**       | **Title**: Fundamental Frequency Modulated Multipulse Voltage Source Converter for Solar PV Plant  
Author: Subir Karmakar (IIT Delhi)* |
| **271**       | **Title**: DC-DC Converter For Unidirectional Battery Charging From Multiple Power Sources  
Author: Sayandev Ghosh (IIT Delhi)*; Bhim Singh (IIT Delhi) |
| **273**       | **Title**: An Improved Virtual Capacitor Control Strategy for DC Electric Railway System  
Author: Wenqi Hao (Hunan High-speed Railway Vocational and Technical College)*; Zhigang Chen (Hunan High-speed Railway Vocational and Technical College) |
| **274**       | **Title**: Equilibrium Optimizer Algorithm for Community Microgrid Scheduling  
Author: Emad Alzahrani (King Fahd University of Petroleum and Minerals)*; Md Shafiullah (King Fahd University of Petroleum and Minerals) |
| **275**       | **Title**: Controlled Power Flow PV-BES System with Power Quality Improvement at Weak Grid by Generalized Integrator Based Filtering  
Author: Syed Bilal Qaiser Naqvi (Indian Institute of Technology Delhi)*; Bhim Singh (Indian Institute of Technology Delhi) |
| **277**       | **Title**: A Reduced Switch Count 7-Level Boost ANPC Inverter Topology for Photovoltaic Application  
Author: Swapan Kumar Baksi (IIT Patna)*; Dr.Ranjan Kumar Behera (IIT-Patna) |
| **299**       | **Title**: An Enhanced Universal Droop Control for Load Sharing in AC Microgrid for Different Load Condition  
Author: Govind Devasuth (VNIT Nagpur)*; Hiralal Suryawanshi (VNIT); Pratik P Nachankar (VNIT Nagpur); L. Narayana Ch (VNIT Nagpur); Ankit Singhal (VNIT Nagpur) |
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| **36**         | **Title:** Electromagnetic Analysis of a Large Hydrogenerator during Symmetrical Grid Fault in a Power System Network  
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: Sourabhb 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)* |
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Author: Rashmi K Patel (Sardar Vallabhbhai National Institute of Technology, Surat)*; R Chudamani (Sardar Vallabhbhai National Institute of Technology) |
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Author: Devidas M Choudhary (Gujarat Technological University) |
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Author: Ujwala V Dongare (VNIT, Nagpur)*; Bhimrao Umre (VNIT, Nagpur); Makarand Ballal (VNIT, Nagpur); Vikas Dongare (MSETCL, Amravati) |
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Author: Ujjwala Kalla (MANIT, Bhopal)*; Shiv Pratap Singh Rajawat (MANIT, Bhopal); Sanjeev Singh Chauhan (MANIT Bhopal); Nikhil Bhati (Government Engineering College Bikaner) |
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Author: Saurabh Mishra (IIT Delhi)*; Anshul Varshney (IIT Delhi); Bhim Singh (IIT Delhi) |
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**Author:** Jayesh U Kothavade (Sardar Vallabhbhai National Institute of Technology, Surat) |
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**Author:** Hina Parveen (IIT Delhi)*; Bhim Singh (IIT Delhi) |
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**Author:** Vinay Kumar Singh (IIT Roorkee) |
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**Author:** Nikhil Bhati (Government Engineering College Bikaner); Ujjwal Kalla (MANIT, Bhopal)* |
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**Author:** Ujjwal Kalla (MANIT, Bhopal)*; Kusum Lata Agarwal (ABES-Engineering College, India) |
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Author: Aryadip Sen (IIT Delhi)*; Bhim Singh (IIT Delhi) |
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Author: Srinivas Khatroth (NIT Warangal)*; Dr. S P Selvi (NIT Warangal) |
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Author: Tanmay Shukla (MANIT, Bhopal); Ujjwal Kalla (MANIT, Bhopal) |
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Author: Praveen Kumar N (Amrita Vishwa Vidyapeetham)*; Aishwarya Vijay (Amrita Vishwa Vidyapeetham) |
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Author: Ujjwal Kalla (MANIT BHOPAL); Shiv Pratap Singh Rajawat (MANIT BHOPAL); Sanjeev Singh Chauhan (MANIT Bhopal); Nikhil Bhati (Government Engineering College Bikaner) |
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Author: Praveen Kumar (Govt. Engineering College Bikaner); Ujjwal Kalla (MANIT, Bhopal) |
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 **Author:** Ujjwal Kalla (MANIT Bhopal), Sangharsh Meshram, Giri Babu; Nikhil Bhati (Government Engineering College Bikaner) |
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 **Authors:** Rajeevan P P (Indian Institute Of Space Science And Technology ); Harikrishna U (Indian Institute Of Space Science And Technology) |
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 **Authors:** Rajeevan P P (Indian Institute Of Space Science And Technology); Tanvi Gudapati (Indian Institute Of Space Science And Technology) |
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 **Authors:** Akhil Manoj Shende (VNIT); Siba Kumar Patro (Visvesvaraya National Institute of Technology (VNIT Nagpur))*; Madhuri Chaudhari (Visvesvaraya National Institute of Technology (VNIT Nagpur)) |
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 **Authors:** Anmol Ratna Saxena (NIT Delhi)*; Venu Sonti (NIT Raipur); Pradyumn Chaturvedi (VNIT Nagpur) |
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Authors: Lokesh J (MIT)*; Savitha G Kini (MIT), Mahesha M G (MIT), Anjan N Padmasali (MIT)
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**Authors:** Ozan Gulbudak (Karabuk University)*, Mustafa G?Kda (Karabuk University), Hasan Komurcugil (Eastern Mediterranean University) |
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**Authors:** Ali Rostami (University of Kurdistan); Navid Rezaei (University of Kurdistan); Amin jalilian (University of Wollongong); Seyed Behzad Naderi (University of Tasmania); Michael Negnevitsky (University of Tasmania)* |
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