



**First IEEE International Conference on
Smart Technologies for Power, Energy and
Control
(STPEC 2020)
(25th to 26th September 2020)**



First IEEE International Conference STPEC 2020 Hosted by Visvesvaraya National Institute of Technology, Nagpur

First IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC 2020) was hosted by the Department of Electrical Engineering, Visvesvaraya National Institute of Technology, Nagpur, Maharashtra, India during 25th to 26th September 2020. This conference was Financially Sponsored by IEEE Industry Applications Society (IAS) and Technically Sponsored by IEEE Power Electronics Society (PELS). It was jointly organized by IEEE Bombay Section Joint Chapter of PELS/IES and Visvesvaraya National Institute of Technology, Nagpur, M.S., India. Due to the present Pandemic Covid-19, STPEC was held Virtually. This conference is one of the most prestigious events under Diamond Jubilee Celebration of VNIT Nagpur

Because of the developments in the area of power electronic components, power system network, energy & storage management technologies, smart & intelligent control strategies, it became imperative to research and design Future Smart Grid which can take care of utility, consumer and environment as well. The widespread use of renewable energy sources, electric vehicles and other non linear loads, various operational challenges are faced by the utility grid such as grid instability, power quality problems, protection issues etc. The Organizing Secretaries of the conference Dr Pradyumn Chaturvedi and Dr Arghya Mitra informed that by keeping the above issues in mind, **Smart Technologies for Power, Energy and Control** was conceptualized in the form of this conference STPEC.

Researchers, scientists, engineers and students from various reputed academic institutions, industries and research organizations from India, USA, Denmark, Norway, Philippines, Italy, Malaysia, Thailand and other countries have presented their research work and shared experiences and ideas in the area of power, energy, control and related engineering applications. This conference accommodates different technical tracks i.e. Power Systems and Smart Grids, Electrical Machines & Industrial Drives, Power Electronic Converters, Renewable Energy & Energy Storage Systems, Transportation Electrification & Automotive Technologies, Control Systems & Applications, Machine Learning & Signal Processing for Power & Energy Applications, and Semiconductor Devices & Circuits.

Total paper received were 324 while after rigorous review process only 152 papers were accepted for presentation. Finally, 141 papers were registered and presented during this two day conference. Six Keynote

Talks were delivered by prominent speakers around the globe. The Keynote Speakers are Prof. Jih-Sheng (Jason) Lai (Virginia Polytechnic Institute and State University, USA), Dr. Mangesh Borage (Raja Ramanna Centre for Advanced Technology, Indore, India), Er. Sushil K Soonee (Advisor, POSOCO, India), Prof. Subhashish Bhattacharya (North Carolina State University, USA), Prof. Alberto Borghetti (University of Bologna, Italy), Prof. Frede Blaabjerg (Aalborg University, Aalborg, Denmark).

Dr Pradyumn Chaturvedi, Organizing Secretary of STPEC, informed that Prof. Frede discussed exhaustively about design for reliability in power electronic systems, Prof. Jason Lai delivered talk on wide bandgap devices-key features and impacts to power electronics design, and Prof. Subhashish discussed about high voltage SiC power devices enabled high power, medium voltage power converters and applications with emphasis on medium voltage solid state transformers and high speed drives. Prof. Alberto talked about resource scheduling of a local energy community while Er. Soonee discussed about power system development and operation in India. Dr. Mangesh Borage elaborated power converters for particle accelerators with challenges and opportunities.

Dr Chaturvedi and Dr Arghya Mitra, Organizing Secretary STPEC, informed that to save the bandwidth, PPT with audio in MP4 format have been invited from each author. These pre-recorded presentations were started and controlled by conference organizers. Authors were present at their place to answer any queries at the end of the video of their presentation. It is very excellent experience for participants. This concept is used first time in such events in India.

The dignitaries present during the Inauguration and Valedictory function of the conference are Prof. Georges Zissis, Laplace University, France (President, IEEE Industrial Applications Society), Prof. Frede Blaabjerg, (President, IEEE Power Electronics Society) and Dr. P. M. Padole (Director, VNIT Nagpur). Other prominent dignitaries present were General Chairs of STPEC Prof. Jason Lai, Prof. Akshay Rathore (Concordia University, Canada), Prof. H. M. Suryawanshi (VNIT Nagpur), Prof. M. V. Aware (VNIT Nagpur); General Co-Chairs Prof. Suryanarayana Doolla (IIT Bombay), Mr. Arvind Kumar (TCS Nagpur), Prof. V. B. Borghate (VNIT Nagpur), Prof (Mrs) M. A. Chaudhari (VNIT Nagpur). They congratulated VNIT family and organizers of STPEC and praised the efforts made by organizers. Participants have shown the interest to attend next version of STPEC in-person. Dr. Arghya Mitra, Organizing Secretary of STPEC, has given vote of thanks.



