

Annual Conference of the IEEE Industrial Electronics Society (IECON 2021)

Special Session on

“Emerging Techniques in Design, Optimization and Interconnection with the Grid for Solar Photovoltaic System”

Organized by

Principal Organizer: Dr. Mohd Tariq (tariq.ee@zhcet.ac.in)

Affiliation: Department of Electrical Engineering, Aligarh Muslim University, India

Background: Solar PV System Design, Energy Storage, MPPT Techniques

Organizer 1: Dr. Adil Sarwar (adil.sarwar@zhcet.ac.in)

Affiliation: Department of Electrical Engineering, Aligarh Muslim University, India

Background: High Gain DC/DC Converter, Metaheuristic MPPT Techniques

Organizer 2: Assoc. Prof. Ali I. Maswood (emaswood@ntu.edu.sg)

Affiliation: School of Electrical and Electronic Engineering, Nanyang Technological
University, Singapore

Background: Power Electronic Converters for Solar PV System

Organizer 3: Dr. Abdul R. Balanthy Beig (balanthy.beig@ku.ac.ae)

Affiliation: Department of Electrical Engineering and Computer Science, Khalifa University,
Abu Dhabi, UAE

Background: Control Techniques for Grid Integration of Solar PV System

Call for Papers

Theme: This special session addresses the applications of Solar PV system in generation of electricity for off-grid, on-grid and EV applications. Due to competitive cost to other renewable technologies and potentially wide applications, the research of PV technology has gained extraordinary development for recent years. Design and integration of different components such as PV arrays, high gain dc/dc converters, grid connected inverters etc. shall be the focus of this special session. This special session also addresses the metaheuristic based optimization techniques for obtaining maximum power as well as for parameter extraction of the solar PV system.

Topics of interest include, but are not limited to:

- Design of Solar PV System
- High gain DC/DC converter
- Metaheuristic MPPT Techniques
- Optimization Technique Based Solution of Maximum Power Extraction
- Parameter Extraction using Optimization/Intelligent Techniques
- Power Electronic Converters (Inverters) for Solar PV System
- Control Techniques for Grid Integration of Solar PV System
- DC-DC and hybrid AC/DC power electronic converters for integration of EV, Energy storages and Solar PV System

Submissions Procedure: All the instructions for paper submission are included in the conference website:
<https://attend.ieee.org/iecon-2021/>


Deadlines:

Full paper submission: June 25, 2021
Paper acceptance notification: July 30, 2021
Camera-ready paper submission: Aug. 27, 2021

The sponsoring IES Technical Committee(s)

Renewable Energy Systems, Power Electronics (PETC)

Brief CV of SS Organizers

	<p>Dr. Mohd Tariq (Senior Member, IEEE) received the Ph.D. degree in electrical engineering with focus on power electronics and control from Nanyang Technological University (NTU), Singapore. He is currently working as an Assistant Professor with Aligarh Muslim University, where he is directing various sponsored research projects and leading a team of multiple researchers in the domain of power converters, energy storage devices, and their optimal control for electrified transportation and renewable energy application. He has authored more than 130 research papers in international journals/conferences including many articles in IEEE Transactions/Journals. He is also the inventor of approx. 20 patents granted/published by the patent offices of USA, GB and India.</p> <p>He was a recipient of the 2019 Premium Award for Best Paper in IET Electrical Systems in Transportation Journal for his work on more electric aircraft and also the best paper award from the IEEE Industry Applications Society's (IAS) and the Industrial Electronic Society (IES), Malaysia Section - Annual Symposium (ISCAIE-2016) held in Penang, Malaysia. He is a Young Scientist Scheme Awardee (2019) supported by the Department of Science and Technology, Gov. of India and also a Young Engineer Awardee (2020) by the institution of engineers (India). He is also the founder chair of IEEE AMU SB and founder chair of IEEE SIGHT AMU.</p>
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	<p>Dr. Adil Sarwar (Senior Member, IEEE) is working with the Department of Electrical Engineering, Aligarh Muslim University, Aligarh, India since 2015. Earlier he was associated with the Electrical Engineering department of Galgotia College of Engineering and Technology, G. Noida, India from 2012 to 2015. He did his B. Tech, M. Tech and PhD from Aligarh Muslim University in 2006, 2008 and 2012 respectively. He has published more than 50 research papers in international journals and conferences. He is also working on world-bank sponsored research projects. He is a member of IEEE and a life member of systems society of India. He has contributed a chapter in Handbook of Power Electronics, 4ed. Edited by M. H. Rashid.</p>
	<p>Dr. Ali I. Maswood (Senior Member, IEEE) received the B.Eng. and M.Eng. degrees, with first class, from Moscow Power Engineering Institute, Moscow, Russia, and the Ph.D. degree from Concordia University, Montreal, QC, Canada.,Having taught in Canada for a number of years, he joined Nanyang Technological University, Singapore in 1991, where he is currently an Associate Professor. He has authored several international journal and conference publications on the topics of his research interests. His work in “FROSIN” switch mode power supply gave rise to several patents. His research interests include power electronics, particularly in converter generated harmonics, novel inverter topology, advanced PWM switching, and power quality.,Dr. Maswood is actively involved in the local IEEE Industry Applications Society/Power Electronics Society chapter and in the steering committee member of the IEEE Power Electronics and drives conference. He is also the chapter-author for the “Power Electronics, Handbook,” published by academic press, San Diego, U.S.A, in 2002.</p>
	<p>Dr. Abdul R. Beig (Senior Member, IEEE) received the B.Eng. degree in electrical and electronics engineering from the National Institute of Technology, Karnataka, Surathkal, India, in 1989, and the M.Tech. and Ph.D. degrees in electrical engineering from the Indian Institute of Science, Bengaluru, India, in 1998 and 2004, respectively. He is currently an Associate Professor with the Advanced Power and Energy Center, Department of Electrical Engineering and Computer Science, Khalifa University, Abu Dhabi, United Arab Emirates. His current research interests include high-gain converters, auto-tuning of grid connected converters, electric vehicles, modular multilevel converters, and SiC-based converters. He has been serving as an Associate Editor for the IEEE Transactions on Industry Applications.</p>

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