



SPECIAL SESSION NOTIFICATION

Anna University, NIT Warangal, India, University of Nottingham, UK and University of Tabriz, Iran jointly organizing a special session on **Multilevel Power Converter: Topologies, Modulation and Control Strategies, and their Application**, as a part of the IEEE International Future Energy Electronics Conference (IFEEC 2025), to be held in Bali Indonesia during November 21-25, 2025. This session aims to bring together researchers and practitioners in the field of Multilevel Power Converters, fostering collaboration and advancing the state of the art in power electronics.

About the Special Session

Multilevel converters are key enablers in the advancement of modern power electronics, particularly for applications in high-voltage systems, renewable energy integration, and industry automation. This special session aims to provide a focused platform for showcasing innovations in topology design, control strategies, and applications of multilevel inverters.

Research papers are invited from scholars, researchers, and professionals engaged in the domain of power electronics and related areas. This special session welcomes original contributions, innovative ideas, and practical implementations that align with the session's focus on multilevel power converters. All submissions will undergo peer review, and selected papers will be presented during the special session at IFEEC 2025.

Topics of Interest Include (But are Not Limited to)

- Novel multilevel inverter topologies
- Modulation and control strategies
- Multilevel inverters in renewable energy systems
- Fault-tolerant MLI designs
- Harmonic reduction and common-mode voltage mitigation
- Grid-connected multilevel inverters
- High-efficiency and low-component-count MLI solutions
- Industrial applications of MLIs

Session Chairs

Prof. S. Ganesh Kumar – Anna University, Chennai, India
ganeshkumar@annauniv.edu | +91 9791071498

Prof. K. Udhayakumar – Anna University, Chennai, India
k.udhay@gmail.com | +91 9444222262

Prof. A. Kirubakaran – NIT Warangal, India
kiruba81@nitw.ac.in | +91 9603722359

Prof. Marco Rivera – University of Nottingham, UK
Marco.Rivera@nottingham.ac.uk

Prof. Pat Wheeler – University of Nottingham, UK
pat.wheeler@nottingham.ac.uk

Prof. Ebrahim Babaei – University of Tabriz, Iran
e-babaei@tabrizu.ac.ir

About the Organizers:



S. Ganesh Kumar completed his B.E., M.E., and Ph.D. degrees from the Madras University and Anna University in 1998, 2005 and 2014 respectively. He is presently working as a Professor in the department of EEE, Anna University, Chennai. He has published 31 journals, 32 conference papers, 8 book chapters, 1 book and 3 patents. He served as a reviewer for international journals (IEEE Transactions on Industrial Electronics, IET Power Electronics, ISA transactions, Automatic and Electric Power Components and Systems) and international conferences (APEC and IECON) and also as an editorial board member for: Journal of Engineering and Fundamentals, International Institute of Engineers, International Journal of Electrical Components and Energy Conversion, IJRSEEE, and JEDT. He has completed two research projects of worth 21 Lakhs as Co-principal Investigator at CVRDE, Avadi, India and 7 Lakhs from AICTE as Principal Investigator under the MODROB scheme. Presently he is involving in two projects and it is as follows:
1. Chief Minister research Grant Project of worth Rs 33.39 Lakhs
2. RUSA 2.0 Project worth of 1.98 Crores from MHRD.
His research area includes, control of electrical drives, multi-level inverters and power converters.



K. Udhayakumar received the B.E. degree in electrical and electronics engineering from the University of Madras, in 1998, the M.E. degree in power systems engineering from Annamalai University, in 1999, and the Ph.D. degree from the Faculty of Electrical Engineering, Anna University, Chennai, in 2009. He is currently working as a Professor with the Department of Electrical and Electronics Engineering, Anna University, with 23 years of teaching and research experience in academia. Presently he is involved in Chief Minister research Grant Project of worth Rs 33.39 Lakhs as Co Principal Investigator. His expertise lies in the field of electrical engineering, particularly in sensors and instrumentation, machine learning, and EV technology.



Kirubakaran Annamalai (Senior Member, IEEE) was born in Kanchipuram, India, in 1981. He received the B.E. degree in electrical and electronics engineering from Madras University, Chennai, India, in 2002, the M.E. degree in power system from Annamalai University, Chidambaram, India, in 2004, and the Ph.D. degree in electrical engineering from the Maulana Azad National Institute of Technology, Bhopal, India, in 2011. He was a Lecturer with the Department of Electrical and Electronics Engineering, Thirumalai Engineering College (Affiliated to Anna University), Kanchipuram, from 2004 to 2006. From 2010 to 2012, he was an Associate Professor with the School of Electrical Engineering, VIT University, Vellore, India. Since 2012, he is working as an Associate Professor with the Electrical Engineering Department, National Institute of Technology Warangal, Warangal, India. His research interests include fuel-cell-based distributed generation, photovoltaic systems, multilevel inverters, and grid interface.



Pat Wheeler received his PhD degree in Electrical Engineering for his work on Matrix Converters at the University of Bristol, England in 1993. In 1993 he moved to the University of Nottingham and worked as a research assistant in the School of Electrical and Electronic Engineering. In 1996 he became a lecturer in Power Electronic Systems with the Power Electronics, Machines and Control Group at the University of Nottingham, UK, becoming a Senior Lecturer in 2003, and a Professor in January 2008. He was Head of Department from 2014 to 2017. He is Head of the Power Electronics, Machines and Control Research Group and Faculty Director of Global Engagement.



Marco Rivera received his PhD in Electronic Engineering from the Universidad Técnica Federico Santa Mara. The Academia Chilena de Ciencias, Chile, presented Prof.-Dr. Marco Rivera with the "Premio Tesis de Doctorado Academia Chilena de Ciencias 2012" for the best PhD Thesis created in 2011 for national and international students in any exact or natural sciences program. He is the Director of the Energy Conversion and Power Electronics Laboratory (Laboratory of Energy Conversion and Power Electronics, LCEEP) at the University of Talca in Chile. At the Universidad de Talca's Electrical Engineering Department, he held the title of full professor. He has been a Professor at the University of Nottingham's Power Electronics and Machine Centre since April 2023. He has approximately 500 scholarly articles published in prestigious international journals and conferences.



Ebrahim Babaei (Senior Member, IEEE) Ph.D. in electrical engineering in 2007. He has written or co-written one book, as well as more than 700 journalss and conference publications. In the field of power electronics, he is the holder of 26 patents. His areas of interest in study include renewable energy sources, FACTS Devices, and the analysis, modeling, design, and control of power electronics converters and their applications. Dr. Babaei has served as Editor-in-Chief of the University of Tabriz's Journal of Electrical Engineering since 2013. His current positions include Associate Editor for the Iranian Journal of Science and Technology, IEEE Transactions of Electrical Engineering, IEEE Transactions on Industrial Electronics, IEEE Transactions on Power Electronics, and IEEE Open Journal of the Industrial Electronics Society. He received the University of Tabriz's Best Researcher Award a number of times. Additionally, he received the IEEE Transactions on Power Electronics 2016 Outstanding Reviewer Award. Since 2015, Dr. Babaei has earned a spot on Thomson Reuters' ranking of the Top One Percent of the World's Scientists and Academics.

**IFEEC 2025 – Special Session on
“Multilevel Power Converter: Topologies, Modulation and Control Strategies, and Their
Application”**

(As part of the IEEE International Future Energy Electronics Conference – IFEEC 2025)

Main Conference Website: <https://ifeec.ugm.ac.id>

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Important Dates:

Paper Submission Deadline: June 19, 2025

Notification of Acceptance: July 19, 2025

Registration Deadline: September 19, 2025

Camera Ready Submission: October 19, 2025

Conference Dates: November 19–21, 2025

Venue: Bali, Indonesia

For further details, contact

Prof. S. Ganesh Kumar – Anna University, Chennai, India
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