XIII CEI ANNUAL MEETING
WIRELESS POWER TRANSFER

CEI UPM Centro de Electrónica Industrial
POLITÉCNICA CAMPUS DE EXCELENCIA INTERNACIONAL

CEI-UPM Annual Meeting **PANEL DEBATE** **16:00-18:00 (UTC+2)**

Wireless Power Transfer

- *Inductive WPT for Electric Vehicle Applications at the ASPIRE Engineering Research Center*
  Prof. Regan Zane and Dr. Abhilash Kamineni – Utah State University, USA

- *Multi-client support with seamless wireless power delivery on distributed Capacitive-coupling medium. Intricate relationships and main challenges*.
  Prof. Mor Peretz – Ben-Gurion University, Israel

- *SWIPT – Simultaneous Wireless Information and Power Transmission for IoT Sensors*
  Prof. Nuno Borges – Universidade de Aveiro, Portugal

Dr. Regan Zane is Center Director of the NSF Engineering Research Center for Advancing Sustainability through Powered Infrastructure for Roadway Electrification (ASPIRE). He holds the David G. and Diann L. Sant Endowed Professor position at Utah State University in the Department of Electrical and Computer Engineering, where he founded the USU Power Electronics Lab (UPEL), the Electric Vehicle and Roadway (EVR) research facility and test track, and the Battery Limits and Survivability Test (BLAST) lab. He has published approximately 200 peer-reviewed articles, has 28 issued patents, has received international and institutional recognition in research, teaching and innovation, and has raised more than $60 million in research funding to date. His recent research programs span electrified transportation charging systems and infrastructure, from battery, vehicle, and charging systems to grid integration, smart charge management, demand response and distributed energy resources. His programs maintain a strong emphasis on collaboration with academic, government and industry partners to develop and transition innovative technologies into the marketplace.

Abhilash Kamineni (Member, IEEE) received his B.E. degree in electrical engineering (with first class honors) and PhD degree in power electronics from the University of Auckland, New Zealand in 2012 and 2017 respectively. He joined Utah State University's power electronics laboratory as a postdoctoral fellow and an assistant professor in 2017 and 2019 respectively. His main research areas include the design of wireless power transfer and resonant power converters.

Mor Mordechai Peretz was born in Beer-Sheva, Israel, in 1979. He received the B.Tech. degree in electrical engineering from the Negev Academic College of Engineering, Beer-Sheva, in 2003, and the M.Sc. and Ph.D. degrees in electrical and computer engineering from Ben-Gurion University, Negev, Israel, in 2005 and 2010, respectively.

From 2010 to 2012, he was a Postdoctoral Fellow at the Laboratory for Power Management and Integrated SMPS, University of Toronto, Canada. In 2012, he joined the Department of Electrical and Computer Engineering, Ben-Gurion University, where he established and currently the directs the Center for Power Electronics and Mixed-Signal IC. Prof. Peretz is the author of over 150 scientific publication and an inventor of 20 patents with significant portion of licensed technologies and knowledge transfer worldwide. His research interests include digital and smart control methods for efficient energy processing, miniaturization of energy interfaces, mixed-signal IC design as well as PMIC, electronics instrumentation, applications of nonlinear magnetics, and management of sustainable and renewable energy systems.

Prof. Peretz serves as an Associate Editor for the IEEE TRANSACTIONS ON POWER ELECTRONICS AND THE IEEE JOURNAL OF EMERGING AND SELECTED TOPICS IN POWER ELECTRONICS.

In addition to his academic duties, Prof. Peretz also serves as a consultant and advisory board member to several industry leaders and is a co-founder and chief scientist of CaPow – wireless energy solutions.

Nuno Borges Carvalho (S'97–M'00–SM'05-F'15) was born in Luanda, Angola, in 1972. He received the Diploma and Doctoral degrees in electronics and telecommunications engineering from the University of Aveiro, Aveiro, Portugal, in 1995 and 2000, respectively.

He is currently a Full Professor and a Senior Research Scientist with the Institute of Telecommunications, University of Aveiro and an IEEE Fellow. He coauthored Intermodulation in Microwave and Wireless Circuits (Artech House, 2003), Microwave and Wireless Measurement Techniques (Cambridge University Press, 2013), White Space Communication Technologies (Cambridge University Press, 2014) and Wireless Power Transmission for Sustainable Electronics (Wiley, 2020). He has been a reviewer and author of over 200 papers in magazines and conferences. He is the Editor in Chief of the Cambridge Wireless Power Transfer Journal, an associate editor of the IEEE Microwave Magazine and former associate editor of the IEEE Transactions on Microwave Theory and Techniques and IET Microwaves Antennas and Propagation Journal.

He is the co-inventor of six patents. His main research interests include software-defined radio front-ends, wireless power transmission, nonlinear distortion analysis in microwave/wireless circuits and systems, and measurement of nonlinear phenomena. He has recently been involved in the design of dedicated radios and systems for newly emerging wireless technologies.

Dr. Borges Carvalho is a member of the IEEE MTT ADCOM, the past-chair of the IEEE Portuguese Section, MTT-20 and MTT-11 and also belong to the technical committees, MTT-24 and MTT-26. He is also the vice-chair of the URSI Commission A (Metrology Group). He was the recipient of the 1995 University of Aveiro and the Portuguese Engineering Association Prize for the best 1995 student at the University of Aveiro, the 1998 Student Paper Competition (Third Place) of the IEEE Microwave Theory and Techniques Society (IEEE MTT-S) International Microwave Symposium (IMS), and the 2000 IEE Measurement Prize.

He is a Distinguished Lecturer for the RFID-Council and was a Distinguished Microwave Lecturer for the IEEE Microwave Theory and Techniques Society.