

Annual Conference: 5-6 July 2022

University of Warwick



Promoting Research and Development in PEMD

The **Centre for Power Electronics (CPE) Annual Conference** will bring together the Power Electronics, Machines and Drives (PEMD) Community to review the latest Research and Development that will impact the Electric Revolution. This Conference will feature Invited Keynotes and Presentations from Leading Academics and Industrialists, views of the Future Demands for Power Electronics, Machines and Drives and Opportunities for Pursuing a Career in this exciting field. The full **Conference Agenda** is shown overleaf.

The Conference and Exhibition features:

- 2 Academic Keynote Presentations from Professor Stig Munk-Nielsen of Aalborg University and Professor Florin Udrea of University of Cambridge
- 2 Industrial Keynote Presentations from David Bock of BMW Group and Dr Chong Ng of OREC
- 5 State of the Art Research Presentations from the Universities of Bristol, Warwick, Edinburgh, Sheffield and Coventry
- Update on the Driving the Electric Revolution Challenge and Future Activities
- Panel Discussion on “Is the Electric Vehicle Charging Infrastructure ready for mass EV rollout”
- Opportunities for Skills, Training and Future Talent Development in PEMD
- Exhibitors from the industrial design, manufacturing and test community
- Poster session with up to 35 posters drawn from the UK research base in PEMD
- Networking BBQ dinner option

The attendees are offered exceptional value at attractive prices to participate in the Conference with support from the Centre for Power Electronics (www.powerelectronics.ac.uk), with a focus on encouraging Students and Early Career Researchers to demonstrate their ideas and network with the PEMD community.

For more information and registration: <https://www.imaps.org.uk/events/cpe2022-centre-for-power-electronics-annual-conference-5-6-july-2022/>



Tuesday 5th July 2022. Day 1

9:00	Enrolment, Exhibition and Networking	
10:25	Welcome, Introduction to Centre for Power Electronics Annual Conference	<u>Prof Layi Alatise</u> , University of Warwick and Conference Chair <u>Prof Xibo Yuan</u> , University of Bristol and Director of CPE
10:40	Sponsor Introduction	<u>Driving the Electric Revolution – Industrialisation Centres</u>
10:45	Keynote Presentation 1: Next Generation Power Devices: Challenges, Possibilities and Opportunities in Wind Turbine Application	<u>Prof Stig Munk Nielsen</u> , Aalborg University, Denmark.
11:30	Lecture 1: Additive Manufacturing in Power Electronics, Machines and Drives	<u>Dr Nick Simpson</u> , UKRI Future Leader and Fellow in Power Electronics, University of Bristol
12:00	Lecture 2: Towards the development of the next generation of power semiconductors	<u>Dr Marina Antoniou</u> , Royal Society Dorothy Hodgkin Fellow in Power Electronics, University of Warwick
12:30	Exhibitor Introduction	
12:45	Break – Lunch, Exhibition, Poster Session and Networking	
14:00	Keynote Presentation 2: Power Electronics for Off-shore Wind Energy Conversion	<u>Dr Chong Ng</u> . Associate Director of Applied Research at OREC
14:45	Lecture 3: What do I work on for the next 30 years? Power-Electronics, Renewables and the Path to 2050	<u>Dr Paul Judge</u> , Royal Society Industry Fellow in Power Electronics, University of Edinburgh
15:15	Panel Discussion: The Challenges Facing the Electric Vehicle Charging Infrastructure in advance of mass EV rollout?	<u>Dr Iain Mosely</u> from Nyobolt <u>Dr Saeed Jahdi</u> , University of Bristol <u>Nigel Jakeman</u> , TPS UK <u>Prof Phil Mawby</u> , University of Warwick.
16:30	Poster Judging	<u>Prof Peter Gammon</u> , University of Warwick <u>Dr Paul Evans</u> , University of Nottingham <u>Prof Lee Empringham</u> , University of Nottingham
18:00	Social event/Barbeque etc	Held at University of Warwick

Wednesday 6th July 2022. Day 2

9:00	Enrolment, Networking and Exhibitor Presentations	
9:30	Keynote Presentation 3: State of the art power devices and novel concepts in Gallium Nitride and Silicon Carbide	<u>Prof Florin Udrea</u> . FREng. Professor and Fellow of the Royal Academy of Engineering at Cambridge University
10:15	Funding talks/Calls <ul style="list-style-type: none"> • Current state of DER initiative and Network Growth • Recap of DER Challenge funded projects • DER-IC network offering • Future DER Activities 	<u>Venn Chesterton</u> , Deputy Challenge Director for Driving Electric the Revolution <u>Prof Jon King</u> from WMG, University of Warwick
11:15	Open Forum and Feedback	
12:15	Break, Lunch, Exhibition	
13:45	Keynote Presentation 4: Key Challenges in WBG Enabled Automotive Power Electronics	<u>David Bock</u> . Project Technical Lead at BMW and Principal Investigator of BEV Project
14:30	Lecture 4 Data-Driven Control of Power Converters	<u>Dr Jonathan C Maldonado</u> , University of Sheffield
15:00	Break – Exhibition and Networking	
15:15	Lecture 5 Compact Modelling for GaN HEMTs	<u>Dr Ke Li</u> . University of Coventry
15:45	Skills, Training and Future Talent Development in Power Electronics, Machines and Drives	UK ESF, DER Future talents building, PEMD Hub, CDT, DER Industrialization centres
16:45	Summary, Prizes, Thanks	
17:15	End of Conference	