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OPTIM-ACEMP 2025 Special Session Proposal

The OPTIM-ACEMP 2025 Conference will include Special Sessions organized on highly specialized topics within the conference scope that have not been covered in previous editions. The organizers of these sessions must observe the conference scope and submit a Session Proposal to the Special Session Chair (see below) for acceptance.

Please provide details of the session in the form below. At least one (and max. two) session organizer is required to provide contact data and a short biography.

Session Details:

Special Session Title: Power Electronics and Motor Drive Systems for Aviation Electrification

Session description (session scope, novelty, goals; 100-200 words):	Keywords, topics:
To meet the urgent need for global net zero emissions, the transportation industry is undergoing a major transformation towards electrification. This shift offers a cleaner, greener alternative to diesel and petrol, as well as a reduction in noise pollution. The aviation industry is at the forefront of this revolution, adopting electric propulsion systems to meet these ambitious targets. Two crucial aspects of aviation propulsion systems are electrical drives and energy management strategies. Electrical drives ensure efficient and reliable operation under various conditions, and effective energy management strategies optimize performance by considering different energy sources. To support and advance research in these areas, this special session aims to gather the latest research and advancements in drive systems and energy management strategies for aviation electrification. The special session will provide a platform for researcher, practitioners and industry experts to share their insights, advancements and challenges in aerospace applications to enhance the performance, efficiency, and reliability of drive systems and energy management strategies.	Electrical machine Power electronics Electric Drive Train Thermal management System integration Cryogenic and superconductivity Electrical power distribution systems Energy management

Organizer(s) Details:

First (main) organizer (title, name and surname): Tao Yang, Professor of Aerospace Electrical Systems	
E-mail: Tao.yang@nottingham.ac.uk	Affiliation: University of Nottingham UK
<p>Tao Yang is a Professor at the University of Nottingham UK and Leader of Aerospace Electrical System Group within the Power Electronics and Machine Research Institute.</p> <p>His research interests include high-speed electric motor drives, power electronics, electrical system design and optimization for aviation electrification. His PhD research within EU Clean Sky on “Modelling electrical power system for more-electric aircraft applications” has resulted in him winning the inaugural “Clean Sky Best PhD Award” in 2016.</p> <p>Dr. Yang has received multiple paper awards in TIE, TIA and TTE. Dr. Yang is an IET Fellow, Industrial Fellow of Royal Academy of Engineering, Fellow of Higher Education Academy, Associate Editor of IEEE Transactions on Transportation Electrification and Chinese Journal of Aeronautics.</p> <p>Dr. Yang is the Chair of IEEE PELS Technical Committee on Aerospace Power overlooking all the technical activities within the committee. Dr. Yang was the General Chair of IEEE PEASA workshop 2023, Technical Programme Chair of PEMD24. Dr. Yang is a Fellow of IET and Industrial Fellow of the Royal Academy of Engineering.</p>	

Second (optional) organizer (title, name and surname):

E-mail:

Affiliation:

Short bio: