

POSTER SESSIONS

The virtual posters are divided in the following 4 topics:

- Advanced Power Electronic Converters and Systems
- Embedded Intelligence, IoT and Reconfigurable Systems
- Emerging Applications
- Modelling, Characterization and Simulation of Components and Power Converters

The virtual poster presentations will be organized in two sessions, with two parallel tracks in each session. For each track there is a unique Zoom link that you can find in the Annual Meeting programme. During the session, each poster will be shortly summarized, clearly explaining the problem that was analysed and the main driver idea that is presented. When the track is finished, the attendees will be able to continue a face-to-face discussion with the presenters going to Zoom breakout rooms that will be organized for each poster. On the web page of the Annual Meeting you can consult all the posters, their distribution per Topic and Session

POSTER SESSION 1

18:00-18:50 h.

| | | |
|-------|---|-----------------------|
| P1_1 | Optimization, design and validation of the LC filter of a three-phase inverter for electric mobility | M. Astudillo |
| P1_2 | A wireless power transfer system with inverse coupled current doubler rectifier for high output current applications | L. Shi |
| P1_3 | High Density, Isolated AC/DC Converters for EV Fast Charger Applications | L. Clavero |
| P1_4 | Forward-Flyback Converter with Cockcroft-Walton Voltage Multiplier: Dynamic Modelling and Valley-Switching Control Design | J.A. Serrano |
| P1_5 | Single Stage High Efficiency and High Density Bidirectional Rectifier for Telecom | M. Aracil |
| P1_6 | Circuit analysis and design for self-synchronous rectification of GaN HEMT devices in DC/DC converters | M. García |
| P1_7 | Peak and Valley Current Control for buck converters | J.C. Rodríguez |
| P1_8 | Digital control with a low cost MCU of a single phase flyback DCM-PFC | F. Alarcón |
| P1_9 | Design of a SiC Inverter for Rotating Magnetic Field in Nanomedical Magnetic Hyperthermia | D. Muñoz |
| P1_10 | Desarrollo de técnicas y dispositivos para el análisis de señales acústicas biológicas marinas | C. Rodríguez |
| P1_11 | Free-Software Development for the Automated Generation of PCB Transformers for High-Power & Voltage Applications | A.J. Ávila-Casanova |
| P1_12 | Nonlinear Stability Analysis of DC-DC Power Electronic Systems by Means of Switching Digital Twin | H. Mazaheri |
| P1_13 | Modelling and Control of a Micro-Scaled Redox Flow Battery | A. Bernaldo de Quirós |
| P1_14 | Comparative Analysis of Different Box Inductor Designs for the Google Little Box Challenge | E. Peredo |
| P1_15 | Characterisation of GaN under Short Circuits events | J. Galindos |

POSTER SESSIONS

POSTER SESSION 2

18:00-18:50 h.

- P2_1 VHF amplifier using microstrip planar baluns D. Tena
- P2_2 Analog Switch Matrix as an interface for connecting the recording and stimulation channels to the microelectrode array of neural networks cultured in vitro S. García
- P2_3 Design of an electrical stimulation path for biological neural networks D. Rodríguez
- P2_4 Effects of magnetic resonance technique on implanted devices in the brain using finite element analysis V. Korenyak
- P2_5 Prototype of an electric field generator for brain tumor treatment P.J. Flores
- P2_6 High Frequency Modular Cascaded Multilevel converter with Carrier Phase-Shifted modulation L. Gómez
- P2_7 High Frequency Compact GaN Based Switching Inverter to Drive Inkjet Printer Head L. Gómez
- P2_8 Detector de alta tensión para catenarias I. Gálvez-Cañero
- P2_9 Use of variable frequency electric fields for brain tumor treating G. Fernández
- P2_10 A Ripple Estimation Technique for Commercial DC-DC Converters F. Pérez
- P2_11 Double-pulse testing for characterization of IGBT module B. Zunzunegui
- P2_12 Methodology for multi-die package semiconductor Thermal Model in a Dynamic Environment J.M. Barón
- P2_13 Verification of the IGBT's thermal model for a three-phase inverter designed by Fagor A. García
- P2_14 Set-up's development for the characterization of magnetic materials at high frequency G. Moral
- P2_15 Dual Active Bridge with Simplified Dual Phase Shift Control over Modified High M.I. Nassef

POSTER SESSION 3

19:00-19:35 h.

- P3_1 Design of a Planar Transformer for High Power and High Voltage G. Nuñez
- P3_2 Design of a Low Losses Core Inductor for Massive Production M. Alegre
- P3_3 IGBT rectifier: from low to high power grids J. Sierra
- P3_4 Floating capacitor based Triple Active Bridge PFC I. Alzuguren
- P3_5 Compact and Efficient High-Frequency LLC converter with narrow frequency-variation for Aircraft Applications A. de Juan
- P3_6 Design & multi-objective optimization of a 3-phase SiC traction inverter A. de Miguel
- P3_7 Topologies comparison for WPT transformer M. Moya
- P3_8 Design of a SiC Module Driver and DC Bus for a Solid State Transformer D. Camino
- P3_9 Design of SiC Solid State Transformer for Medium Voltage Applications Using Advanced Optimization Techniques D. Santamargarita
- P3_10 Transformerless, string/multi-string, three-phase-grid-connected inverter for use in commercial/residential 1500-V PV applications" B. Stevanovic
- P3_11 Highly dynamic Close-Loop dv/dt gate driver of a power switch I. de Cominguez

POSTER SESSION 4

19:00-19:35 h.

- P4_1 Run-Time Monitoring and ML-Based Modeling in Reconfigurable Multi-Accelerator Systems J. Encinas
- P4_2 Using Chisel to Implement ML Accelerators as Custom RISC-V Instructions R. Rodríguez & P. Mazariegos
- P4_3 Highly automated platform for Real-Time validation of Reconfigurable MPSoC-based applications A. Pérez
- P4_4 Multi-grain Reconfigurable and Scalable Overlays for Hardware Accelerator Composition R. Zamacola
- P4_5 Post-quantum IoT Security in the extreme edge J. Señor
- P4_6 Automatic data-set generation for deep neural networks training for object classification with LIDAR C. Wisultschew
- P4_7 On-board Machine Learning-based Positioning System for Smart Railway Systems E. Magán
- P4_8 Machine Learning – based Stress recognition using unobtrusive wearable devices C. Filiu & E. Magán
- P4_9 Lossless Data Compressor for Space Applications D. Vázquez
- P4_10 Design of a recording channel for cultured neural networks A. Aparicio