

ESA Power Workshop 2025

Wednesday 9 April 2025

Power Management: Introduction (ESA) - Tennis Hall (09:00 - 09:05)

-Conveners: Arturo Fernández

Power Management: Session 1, European radiation hard WBG devices: Launching silicon carbide to space: a program developing rad-hard power devices to minimise SEE-related derating (University of Warwick) - Tennis Hall (09:05 - 09:35)

-Conveners: Peter Gammon

Power Management: Session 1, European radiation hard WBG devices: EPOSIC: A Radiation Hard SiC MOS technology for space applications (Infineon) - Tennis Hall (09:35 - 10:05)

-Conveners: Martin Goellner

Power Management: Session 1, European radiation hard WBG devices: GaN half-bridge integrated circuits for power converters (TAS-B and MinDCet) - Tennis Hall (10:05 - 10:35)

-Conveners: Mike Wens; Marc Fossion

Power Management: Session 1, European radiation hard WBG devices: Radiation Tolerant / Hardened GaN for space (Semi Zabala) - Tennis Hall (10:35 - 11:05)

-Conveners: Simon Wainwright

Power Management: Session 2, Application of WBG devices in space: GaN power supplies for harsh environments (ESA) - Tennis Hall (11:20 - 11:50)

-Conveners: Nils Van der Blie

Power Management: Session 2, Application of WBG devices in space: Design of GaN based Switching Latching Current Limiter (LCL) and analysis of GaN gate open failure (ESA) - Tennis Hall (11:50 - 12:20)

-Conveners: Nikola Boskovic

Power Management: Session 2, Application of WBG devices in space: Enhancing the compactness of a high voltage power converter by increasing the switching frequency (TAS-B) - Tennis Hall (12:20 - 12:50)

-Conveners: Benjamin Spitaels

Power Management: Session 2, Application of WBG devices in space: SiC in space for very high power applications (ESA) - Tennis Hall (12:50 - 13:20)

-Conveners: Antxon Arrizabalaga

Power Management: Session 3, Power systems and voltage regulators: Research of advances of supercaps for power supply units (University of Žilina) - Tennis Hall (14:20 - 14:37)

-Conveners: Michal Frivaldsky

Power Management: Session 3, Power systems and voltage regulators: Highly integrated voltage regulators for powering FPGAs and SoCs for AI (PulpoSemi) - Tennis Hall (14:37 - 14:54)

-Conveners: Séamus O'Driscoll

Power Management: Session 3, Power systems and voltage regulators: Radiation Hardened (RH) Point of Load Converter chip in plastic package (STMicroelectronics) - Tennis Hall (14:54 - 15:30)

-Conveners: Salvo Pappalardo

Power Management: Session 4, ICs for space applications: PWM controller IC for digital comfort in analogue regulation loops and mitigation of failure propagation (Space IC) - Tennis Hall (15:45 - 16:02)

-Conveners: Volodymyr Burkhay

Power Management: Session 4, ICs for space applications: Conan : a 130V electronic circuit-breaker and latch-up current limiter controller (Weeroc) - Tennis Hall (16:02 - 16:19)

-Conveners: Julien Fleury

Power Management: Session 4, ICs for space applications: GaN ready single chip dc-dc controller (HSC) (TAS-B) - Tennis Hall (16:19 - 16:36)

-Conveners: Marc Fossion

Power Management: Session 5, Failure analysis and control: A comparative study on experimental loop-gain measurement techniques applied to digitally controlled DC-DC converters (ESA) - Tennis Hall (16:40 - 16:57)

-Conveners: Valentin Riat

Power Management: Session 5, Failure analysis and control: Automated failure analysis for electronic systems in space applications (Power Smart Control) - Tennis Hall (16:57 - 17:14)

-Conveners: Marcos Robles Monterde

Power Management: Session 5, Failure analysis and control: Modular architecture with decentralized control for a regulated power distribution bus (Universidad de Oviedo) - Tennis Hall (17:14 - 17:31)

-Conveners: Pablo Fernández Miaja