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2025

Innovative materials and devices for power/energy management

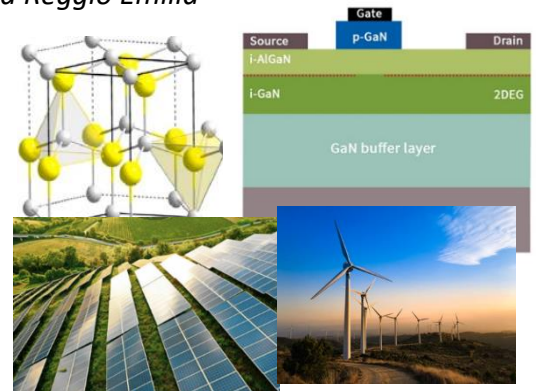


October 29, 2025

Data Center uniMORE

Via E. Gorrieri 31, Modena <https://maps.app.goo.gl/16JNtvZNS2BfFg2M6>Organized by Pierpaolo Palestri and Luca Selmi, *University of Modena and Reggio Emilia*

Progress in the green energy transition requires the integration of different energy sources (photovoltaic, wind, etc.) and addresses users ranging from household to electric cars to large industrial installations. Power conversion and power/energy management play a key role in this direction, as well as in the large, energy hungry data centers supporting information transfer and elaboration. Power converters based on new semiconductor materials, such as Gallium Nitride (GaN), offer high efficiency and reduced converter volumes.



This workshop (organized in celebration of the 100 years of the Field-Effect-Transistor and 850 years of the University of Modena and Reggio Emilia) brings together experts in fields overarching GaN device fabrication, characterization, and modeling of transistors based on alternative materials including GaN and beyond. Guided by their expert opinion, the workshop will explore the state of art of this technology, its potential, and the future perspectives for continued progress toward more sustainable industry and societies.

Program

14.00-14.15	<i>P. Palestri & L. Selmi (University of Modena and Reggio Emilia): Opening</i>
14.15-14.45	<i>O. Haeberlen (Infineon Technologies Villach): GaN Power Devices – Enabling Ultimate Efficiency and Power Density in Power Conversion</i>
14.45-15.15	<i>M. Meneghini (University of Padova): Reliability of novel materials for RF electronics and power conversion: GaN and beyond</i>
15.15-15.45	<i>N. Zagni & A. Chini (University of Modena and Reggio Emilia): A combined experimental/simulation approach to investigate trapping-related issues in GaN-based power devices</i>
15.45-16.15	<i>Coffee break</i>
16.15-16.45	<i>L. Larcher (Applied Materials Reggio Emilia): A defect-focus approach for performance/reliability modeling in power devices</i>
16.45-17.15	<i>P. Palestri (University of Modena and Reggio Emilia): Modeling electron transport in GaN devices</i>
17.15-17.45	<i>A. Sanders ((Infineon Technologies Munich): Integrated GaN Solutions</i>
17.45 – 18.00	<i>Closing remarks</i>

Registration is free of charge. Confirm your attendance at the link <https://forms.gle/rJsvbaZdMMY8P9756>