



UNIVERSITY OF VALENCIA

The Instrumentation and Industrial Electronic Laboratory (LEII), with its 16 staff members, has two divisions: Power Electronics Division and Electronic Instrumentation Division. The Power Electronics Division is responsible for power electronics education at the University of Valencia and carries out government and industry projects. Research activities cover various areas related with high-efficiency power converters: power electronics for e-Mobility infrastructure, aerospace power systems, high power resonant converters for industrial applications, advanced control techniques and power devices characterization.



Key Research Fields & Competence Areas:

- e-Mobility Infrastructure
Ultrafast high power DC chargers, inductive chargers
- Aerospace Power Converters
Battery charge/discharge regulators, solar array regulators, power supplies.
- High Power Resonant Converters
Industrial induction heating, high voltage applications
- Advanced Control Techniques
Non-linear control and vector control (DSP) focused on renewable applications
- Power Electronic Devices
Static, dynamic and thermal characterization of passive and active devices (Si, SiC)

Institute Highlights:

- Powerful Lab-facilities
Gain-phase and impedance analyzers, 1ph and 3ph AC and DC power sources, dynamic power loads, EMI test tools, climatic chamber, and electronic simulation tools.
- Power Semiconductor Test-Bench
Large temperature range (-170°C to 400°C), high voltage and high current setup.

