

Centro de Electrónica Industrial (CEI)

Universidad Politécnica de Madrid (UPM)

<http://www.cei.upm.es>



CEI UPM

Centro de
Electrónica
Industrial

SUMMARY

Research in **power supply systems** for telecom, aerospace, automotive, industrial and medical applications for companies worldwide (ABB, Agere Systems, Airbus, Alcatel, Ansoft, Ansys, Astrium-Crisa, Boeing, Cochlear, EADS, Enpirion, General Electric, Indra, Intel, Philips Hearing Implants, Premo, Siemens, Sener, Tecnobit, etc)

Research covers **power conversion**, **power components** and **system architectures**, with especial emphasis on power management.

The group cooperates regularly with ECPE, IEEE and other professional associations.

Research line	With emphasis on...
Power conversion	Power Supply systems: DC-DC conversion, DC-AC inverters and AC-DC conversion with Power Factor Correction, filters, storage elements, circuit breakers, etc
Power management Modeling	Energy Efficiency: Supplying Microprocessors and RF amplifiers Devices, converters & systems, from magnetic components to system level models for large architectures
Digital Control	Non-linear control, fast dynamics, multi-phase conversion, monitoring & supervision,...
Wide bandgap devices EMI/EMC	GaN & SiC for high frequency and/or high temperature applications Device level models for converter and system simulation
Renewable energy	Bidirectional DC-DC conversion, energy storage, battery chargers, energy harvesting, and others for solar energy, electric vehicles, autonomous systems, etc

INSTITUTE HIGHLIGHTS

- ✦ 15 faculty, 10 doctoral students, 27 master students
- ✦ Over 75 R&D projects for companies and 55 public funded R&D projects
- ✦ Over 350 publications in journals and conferences

CONTACT INFORMATION

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