

The Department of Information Engineering includes approx. 90 Professors (38 full, 25 associate, 27 assistant), 120 PhD students and Research Fellows, 29 Staff Personnel, 45 research labs and 13 teaching labs. The Power Electronics Group at DEI does research in various power electronics application areas, ranging from dc/dc converters, lighting applications, power quality and renewable energy conversion systems.

Key Research Fields & Competence Areas:

- **Power Conversion:**
 - Power converter topologies, control, power management and power supplies (PFC, dc-dc converters, etc.)
- **Digital control in power electronics:**
 - Both at discrete level (uC, DSP, FPGA) and at IC level; integrated digital and mixed-signal controllers for SMPS
- **Lighting applications:**
 - Power conversion for HID, CCFL, LED, etc..
- **Electromagnetic Compatibility**
- **Energy Systems:**
 - Photovoltaic and fuel cell applications. Energy scavenging systems. Power quality conditioners (active filters, ups, etc..)

Institute Highlights:

- **Power Electronics Laboratory (PEL lab):**
 - facility for general purpose experimental activity in power electronics
- **Test Benches for Photovoltaic applications**
- **Integration with EMC Test Laboratory**
(www.creiven.it)
- **Integrated projects with PEL Labs Network:**
 - PEL lab at DTG (University of Padova, Vicenza): prof. Mattavelli and prof. Buso
 - PEL lab at DIEGM (University of Udine): prof. Saggini

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