



The chair for Power Electronics and Electrical Drives is part of the Institute of Electrical Power Engineering at the University of Rostock. It is responsible for the education in the field of electrical drives and power electronics for all engineering students and carries out industry and government funded research projects. Special emphasis is placed on high-power semiconductors and their application in drive and energy systems.

Key Research Fields & Competence Areas:

- **High-Power Semiconductors**
 - Characterization and application of IGBT's, diodes and wide-bandgap devices
 - Gate drive development
- **Low-, Medium and High Voltage Converters**
 - Topologies for drives, energy-supply and -distribution
 - Control and protection
- **Drive Systems**
 - Interaction between drives, converters and the grid

Institute Highlights:

- Test benches for single- and multiple pulse testing of high voltage semiconductors (up to 6.5 kV and several kA)
- High voltage lab (up to 100 kV AC)
- Test benches for electrical drive systems (up to 75 kW)
- Simulation tools for power semiconductors (MEDICI), converter circuits and control (SIMPLORER and MATLAB / SIMULINK / PLECS) and grids (DIGSILENT)

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