

Research Lines

The TEISA Department was founded in 1996 as the result of the division of the now extinted Electronics Department at the University of Cantabria. Since then, the main research areas are developed within the different departamental groups, being summarized as follows:

Computer and Automation Group

Advanced modelling and control
Seacraft vehicles control and guide
Naval automation
Industrial electronics control

Control Engineering Group

Application of ultrasonic techniques for automation
Advanced control systems
Process control with programmable automata

Photonics Engineering Group

Optic communication systems
Fiber optics sensors
Microwave optic interactions
Devices for optical communication systems

Microelectronics Engineering Group

Design of ASIC circuits for industrial applications
Testable design and test of digital and mixed digital-analog circuits
Design and verification of electronic systems
Training for postgraduate students in Microelectronics

Biomedical Engineering Group

Fiber optic devices and networks
Non linear effects
Optical reflectometry, interferometry, polarimetry and spectroscopy

Research lines

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Optical techniques for structural characterization and treatment of biologic tissue

Fiber optic endoscopes and probes for biomedical applications

Optical techniques for molecular characterization of biological tissue

Radio over fiber optics

Optical techniques for surgery applications

Each of these research areas produce numerous research works, whether in international forums or in specialized publications and proceedings, as well as the participation in several I+D projects. You can have a look at the publications and research sections for more detailed information.