

## LABORATORY OF EMBEDDED AND DISTRIBUTED SYSTEMS - LEDS

*Universidade do Vale do Itajaí (UNIVALI)*

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**Área:** Ciências Exatas

**Linhas de Pesquisa:** Digital Systems Design; Systems-on-Chip; Distributed Systems; Embedded Systems

### Breve descrição das atividades de pesquisa

LEDS (Laboratory of Embedded and Distributed Systems) is a research group in Computer Systems investigating new technologies and solutions for developing embedded computer systems based on microcontrollers, DSPs, and FPGAs. In addition, it also aims to investigate solutions to problems in interactive computer environments through research and development of distributed systems, focusing on aspects of security, privacy, and mobility. The works developed by LEDS researchers and students cover a variety of topics ranging from multiprocessor systems and signal processing technologies to security and privacy solutions in networked systems and the Internet of Things, and reaching the level of applications for Telecommunications, Assistive Technologies, Space Systems, Smart Cities, and Industry 4.0.

### Impacto das pesquisas desenvolvidas para a sociedade e ciência

LEDS researchers investigate state-of-the-art technologies and their use to solve real-life problems. Research projects are carried out in cooperation with research groups from Brazil and Europe and with Brazilian companies. Among the LEDS projects, the following can be highlighted: the development of technologies to assist people with disabilities, the design and implementation of circuits and computational systems for use in satellites, and the development of dedicated processors to accelerate image processing in computer vision applications. FAPESC, CNPq, CAPES, and FINEP are among the funding agencies supporting these projects.