The Software/Hardware Integration Lab (LISHA) was founded in 1985 to promote research in the frontiers between hardware and software. Since then, it has dedicated considerable efforts to research in areas such as computer architecture, operating systems, computer networks and the related applications. Currently, the laboratory focuses on innovative techniques and tools to support the development of embedded systems.

LISHA is part of EMBRAPII MOVE
LISHA is part of the recently created EMBRAPII Institute for Mobility Technologies (MOVE).

SBESC 2021 and LADC 2021
LISHA hosted SBESC 2021 and LADC 2021, the reference conferences of Computer Engineering and Dependability in Latin America.

OpenEPOS 2.2
A new version of OpenEPOS has been released! Check the new features.

IoT Platform
LISHA's IoT Platform now supports dozens of research projects. For further information about how to join it, please check this link.

SmartData
A new version of LISHA's IoT Platform based on SmartData and the Trustfull Space-Time Protocol(TSTP) is now available!

LISHA is part of SecCPS
LISHA is a founding member of UFSC’s Research Center for Cyber-physical Systems Security (SecCPS).

OBNZip
LISHA and LVA are working together to make Ocean Bottom Nodes more intelligent. We will build a multidisciplinary team to develop advanced compression algorithms and machine learning models to handle submarine seismic signals. Check the open positions and join us on this journey.

Rota 2030 with Renault
LISHA and Renault are joining forces to develop innovative solutions for the automotive industry in the realm of Program Rota 2030. Prof. Giovani Gracioli will lead a team of experts at LISHA on the pursuit of an Intelligent Data Acquisition and Analysis System for Automotive Controllers.

LISHA and AQTech for Smart Energy
LISHA and AQTech are working together to make hydroelectric power generators more intelligent.
**SmartX**

**LISHA’s CPS Management Platform** is now fully integrated with the **IoT Platform**, adding features such as defect tracking, logging, geolocation, and service ticketing.

**Prof. Fröhlich** will lead a multidisciplinary team to develop advanced tools for predictive maintenance of large hydroelectric generators. [Read more ...](#)

**MCTIC's IA² Program**

LISHA is now part of **MCTIC's IA² Program**. **Prof. Gustavo Medeiros de Araújo** will be working together with accelerators **HARDS** and **DARWIN** and **SOFTEX** to support startups while innovating with **AI** solutions to real problems.