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 EMBRAPPI MOVE**

LISHA is part of the recently created EMBRAPPI 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!

**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.
**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.

**LISHA and AQTech for Smart Energy**

LISHA and AQTech are working together to make hydroelectric power generators more intelligent. 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.