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 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!

**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.
**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.

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**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 ...](#)

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**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.