The Ecole Polytechnique Fédérale de Lausanne (EPFL) is one of the two Ecoles Polytechniques Fédéra

LSRO the largest robotics lab of the EPFL. It comprises approximately 50 researchers. LSRO is an internationally renowned research unit in the field of robotic system design.

Expertise. LSRO has a large experience in the design of high precision robots, medical robotics systems and miniature robots. In mobile robotics, its field of competence spans from very small robots sizing only a couple of centimetres and rolling on flat surfaces, up to inspection robots for power plants, robots for daily uses in homes, for space applications or for educational purposes. Among recent results are autonomous robots interacting with chicks, robots for inspections of tubes and complex infrastructures and compact robots (few cubic decimetres) for wall climbing and manipulation of objects is domestic environments.

LSRO is involved in various National, European and International projects, both academic and industrial. Technology transfer is mainly realized through spin-off companies. The collaborators of the Lab have started new companies in the field of mobile robotics, scientific software, haptic devices for medical simulators, robot control and robot design.

Role oin ASCENS. EPFL- LSRO is worldwide leader in the design of mechatronics for miniature mobile robots. In ASCENS, EPFL- LSRO will provide, support and adapt the mobile robots used in the swarm robotics case study (work package 7).

In particular EPFL- LSRO will design and manufacture a set of new robotics modules fitting the needs of the robotics application. These modules will be mounted on existing platforms developed by EPFL- LSRO and owned by EPFL- LSRO and IRIDIA. Furthermore, EPFL- LSRO will contribute to the work package 8 activities in assembling a catalogue of challenges, solutions, and best practices. Finally, EPFL will contribute tools to work package 6.

Key members

- Francesco Mondada
- Philippe Rétornaz