

| DAY #2 – Facilities Tours & Exhibitions | |
|---|--|
| PLATFORMS | Micro and nanotechnology platform - clean room, Hugues Granier (1 hour) The micro and nanotechnologies platform, part of ReNaTech national network, operated by a 36 members technical staff offers more than 200 equipment to support internal and external projects. |
| | Characterization platforms, Sandrine Assie-Souleille (1 hour) To perform research at the frontier between technology and biology, LAAS-CNRS has designed a unique facility to exploit our micro/nanosystems for the analysis and manipulation of biological samples |
| | Humanoid Robotic, Olivier Stasse, Philippe Souères (30 min) The humanoid robotics platform has two robots of human size: the HRP-2 humanoid robot, and the first robot of the TALOS series: Pyrene. They are very challenging experimental platforms use to test algorithms for motion generation. |
| ENERGY AXIS | Energy Building, Marise Bafleur, Ilias Papas (45 min) The Energy Platform is an instrumented experimental building for the implementation and testing of energy management technologies (hardware and software) within a context of renewable energies and storage technologies deployment. |
| | Photovoltaic low voltage dc microgrid for building with energy storage systems, Lionel Séguier (20 min) In order to develop and improve strategies for sustainable energy management, a low voltage direct current (LVDC) micro-grid (MG) including task scheduling algorithms and dedicated power electronic converters has been deployed in the ADREAM Building-Integrated Photovoltaic (BIPV) of LAAS-CNRS. |
| | Pioneering GaN technology - Start-up EXAGAN, David Tremouilles & Éric Moreau (30 min) Discover EXAGAN / LAAS research and development partnership on new Gallium Nitride (GaN) power components for energy management. |
| AMBIENT INTELLIGENCE AXIS | Robotics research in Aerial Physical Interaction, Antonio Franchi, Davide Bicego, Marco Tognon (30 min) Illustration of the flight of a tilted-propeller aerial robot touching the environment to perform physical interaction tasks. |
| | Illustration of examples of cooperation between man, robot and the environment, Christelle Ecrepont, Aurélie Clodic, Eric Campo, Thierry Monteil & Rachid Alami (30 min) Connected apartment, optimized building, intelligent sole... |
| | Active binaural localization of a sound source, Patrick Danès (30 min) This demo shows how a mobile robotics head endowed with two ears can analyze its sensorimotor flow and control its motion so as to localize a sound source in the "most informative" way. |
| SPACE AXIS | A nanosatellite optoelectronic payload dedicated to radiation induced degradation measurement in erbium doped fiber, Arnaud Fernandez (30 min) NIMPH nanosatellite mission and more precisely its embedded metrology setup designed by LAAS-CNRS and Paul Sabatier University researchers will be presented. |
| | Embedding an optimization-based control strategy for spacecraft rendezvous on a LEON 3 processor: about the software development platform and the Hardware-in-the-loop demonstrator, Frédéric Camps, Christophe Louembet (30 min) An optimization-based controller has been embedded on a synthesized LEON3 microprocessor. We focus here on the software development, compilations chains and HIL demonstrator construction |
| | RF and microwave energy harvesting for space applications, Alexandru Takacs (30 min) This presentation highlights the recent advances in the field of the RF and microwave energy harvesting onboard of broadcasting satellites in order to power autonomous wireless sensors. |
| ALIVE AXIS | High resolution 3D printing and bioprinting: application to microfluidics and cell culture, Julie Foncy, Rémi Courson, Fabien Mesnilgrente & Nicolas Bernardin (1h30) Multifab is an open platform devoted to the development of innovative multi-scale and multimaterial 3D printing technologies with applications in microelectronics, integrated optics, microfluidics and biology |
| | BIOSOFT Labcom, Jean-Christophe Cau, Emmanuelle Trévisiol, Christophe Vieu (30 min) In the framework of an original Public/Private partnership, BIOSOFT Labcom develops new methods of soft lithography (mainly Micro-Contact Printing and Capillary Assembly) for the biomedical field. |