

## SEDI GENERICHE SCUOLA INGEGNERIA

### DESCRIZIONE TIROCINI

(per ulteriori informazioni contattare l'Ufficio Relazioni Internazionali della Scuola [international@ingegneria.unifi.it](mailto:international@ingegneria.unifi.it) )

1. **UNIVERSITY OF MALAGA - Spagna** (2 studenti della Magistrale - durata 6 mesi)
  - a. 1.-Solar cooking. We investigate the behaviour of new models of solar cookers. The work is both theoretical and experimental. Write to: Antonio Carrillo or Xabier Apaolaza (ancarrillo@uma.es; apaolaza@uma.es)
  - b. Thermal modelling and optimization of solar protections. We have an office with a solar protection electronically controlled and we want to optimize the position of the store during the day to minimize energy consumption but maintaining thermal comfort. Write to: Francisco Fernández (franciscofh@uma.es).
  - c. Modelling of new refrigeration cycles to reduce ODP and GWP (reduction of refrigerant charge, use of new refrigerants, etc.) and to improve EER. Write to: Bernardo Peris (perisbernardo@uma.es)
  
2. **ECOLE D'INGENIEURS PAOLI TECH - Università di Corsica - Francia** (2 studenti della magistrale – durata 2 mesi)
  - a. The platforms MYRTE and PAGLIA ORBA are the two most well-known facilities linked to Paoli Tech. The MYRTE platform unites photovoltaic solar energy with a hydrogen chain as an energy carrier to store renewable energies. It studies how hydrogen can store solar energy and guarantee its strength and power. The PAGLIA ORBA platform on the other hand is a smart power grid. It couples a range of storage units, smart grids and different renewable energy sources, supplying energy to different facilities in a micro-network.
  - b. Paoli Tech also relies on the laboratory “Sciences pour l'Environnement”, also accredited by the CNRS and which includes different projects such as renewable energies, forest fires management, natural resource preservation, fields and waves in applied mathematics, water management and development in the Mediterranean area, information technology and communication, and finally Smart Building design and Building rehabilitation on the Campus in CORTI.
  - c. Paoli Tech also develops R&D topics in architectural acoustic in collaboration with the COMPA's team: it brings together mathematical and fundamental physics research around optimization of the urban acoustic comfort for rehabilitation and renovations.
  - d. Propagation and diffusion in the presence of complex bottom / surface boundaries in underwater acoustics
  - e. Improvement of urban acoustic comfort in the context of building renovation

3. **FACULTY OF BIOSCIENCE - UNIVERSITY OF GENT - Belgio** (2 studenti della Triennale o Magistrale – durata 6 mesi) Research at BIOMATH see the link <https://biomath.ugent.be/index.php/>
4. **INSA ROUEN NORMADIE – Francia** (3 studenti della triennale o magistrale – durata 6 mesi): Activities related to Energy (Fluid Mechanics, heat and mass transfert, combustion, renewable energy)
5. **SAARLAND UNIVERSITY, DEPARTMENT OF SYSTEMS ENGINEERING - Germania** (3 studenti della triennale o magistrale – durata 6 mesi): to be determined
6. **SIEMENS INDUSTRY SOFTWARE N.V. – Belgio** (3 studenti della triennale o magistrale – 3 laureati triennale o Magistrale durata 6 mesi) Mechanical and Mechatronic Engineering in relations to:
  - a. Noise and vibration engineering
  - b. vehicle safety, active safety, autonomous vehicles, rider and driver modelling
  - c. highweight vehicles, lightweight structures
  - d. hybrid/electric vehicles
  - e. model base counted system, hardware in the loop
  - f. system driven product development, system engineering
7. **VON KARMAN INSTITUTE FOR FLUID DYNAMICS – Belgio** (3 studenti della triennale o magistrale, 3 studenti laureati triennale o magistrale, 3 dottorandi, 3 PhD – durata 6 mesi): Research in Fluid Dynamic in aerospace, Aeronautic, Turbomachinery, Propulsion Environmental and Industrial Flow.