

Lascala – Erasmus mundus master

<https://master-lascala.eu/>



SAPIENZA
UNIVERSITÀ DI ROMA



Gianluca Cavoto Stanza 328 VEF

gianluca.Cavoto@uniroma1.it

Lascaia : Large scala accelerator and laser



SAPIENZA
UNIVERSITÀ DI ROMA

SZTE
UNIVERSITY OF SZEGED



LUND
UNIVERSITY

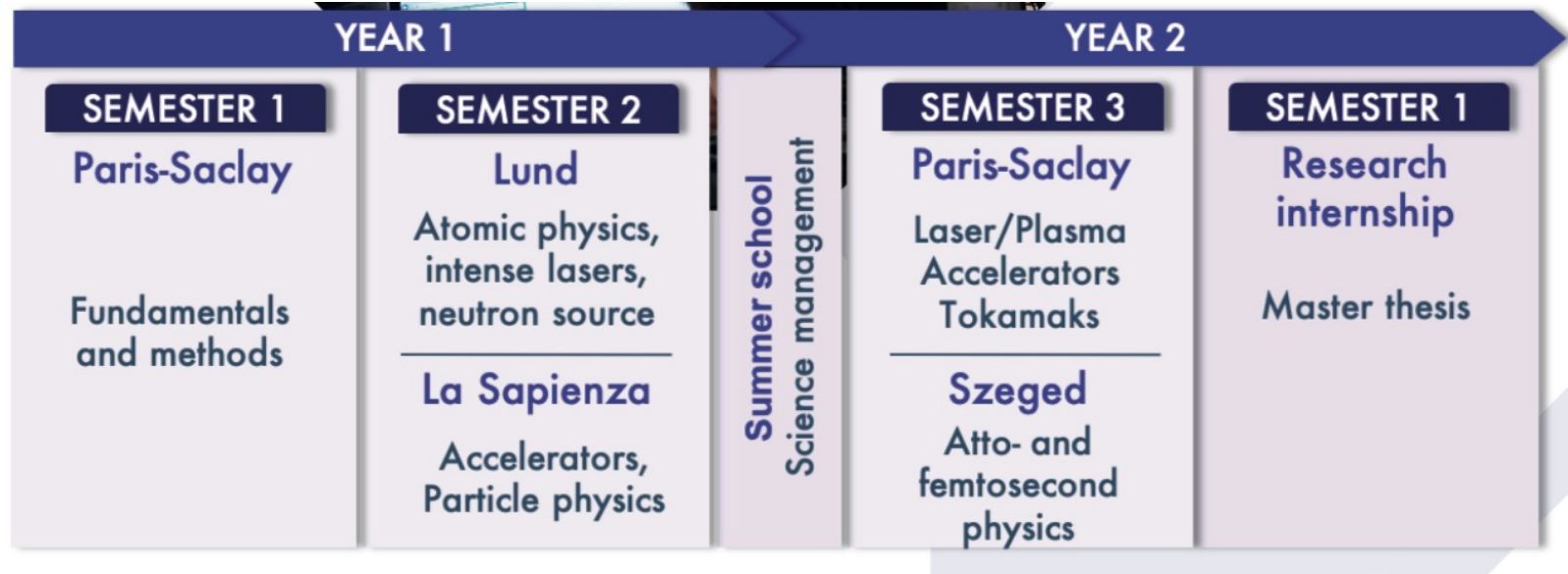


- To grow **experts** in accelerators, high power lasers and associated advanced sources.
- Training includes **laboratories** and hands-on activity in large scala facilities (Paris research area, INFN LNF, ...).
- Summer/winter school to foster students entrepreneurial skills.
- Contact with SME and research and innovation centers.

Here in Roma we focus on particle physics and accelerator

Mobility of students

TWO DIFFERENT PATHS

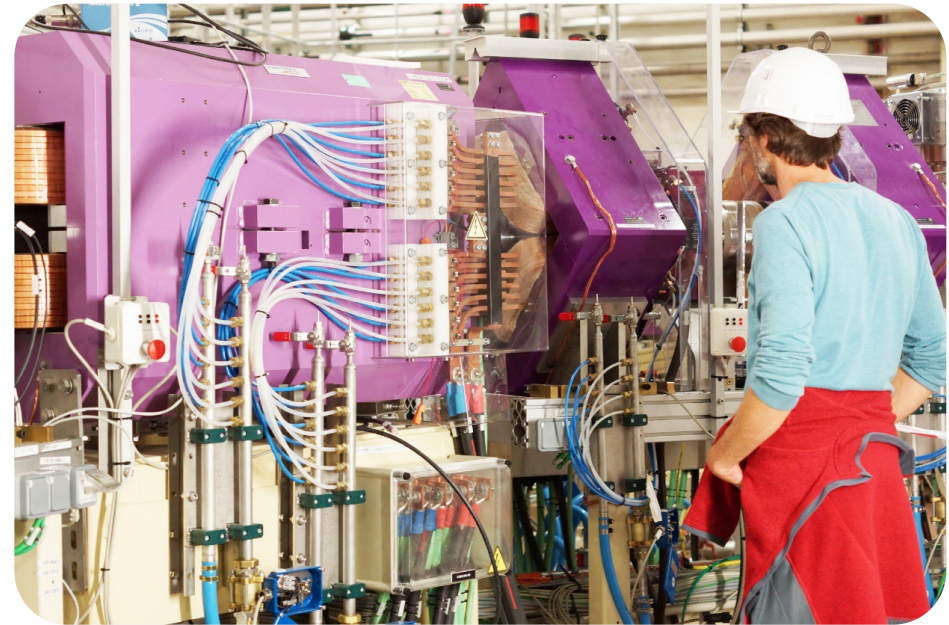


- Naturally connected to our *Fundamental Interactions : theory and experiments* curriculum at Physics (Sapienza)

In Sapienza we have Ph.D. school in Accelerator Physics

Collaborations

- Access to **CERN**, **ITER** (Cadarache), **Soleil** synchrotron, **ELI** (Hungary), **LNF** (Italy).
- Partner **Princeton Univ** (USA), **Weizmann Inst** (Israel), **Applied Physics Russian academy of Science**
- Summer school in Genoa (IT)
- Winter school JUAS



Courses at Sapienza for LaScala students

Compulsory courses (21 ECTS):

- **Physics laboratory II (9)**
 - *a real hands-on lab*
also at INFN LNF at Frascati
- **Particle Physics (6)**
 - *Modern particle physics, need background of quantum mechanics, rel. kinematics*
- **Detectors and accelerators in particle physics (6).**

The full catalogue: <https://master-lascula.eu/programme/course-catalogue>



Courses for Lascala students – free choice (12 ECTS)

- **Accelerator Physics and relativistic electrodynamics (6 ECTS)**

- Plasma Physics and Nuclear Fusion (6 ECTS)
- Optics (6 ECTS)
- Laser fundamentals (6 ECTS)

- Advanced Machine Learning for Physics (6 ECTS)
- Computer Architecture for Physics (6 ECTS)

- Nuclear physics (6 ECTS)
- Methods in experimental particle physics (6 ECTS)

Collaborazione

- Ritengo sia una opportunità per INFN Acceleratori per attrarre giovani alla fisica degli acceleratori
 - In prospettiva per avere dottorandi.
- Collaboriamo su:
 - **Proporre temi di tesi di laurea.**
 - La tesi si deve svolgere da Marzo a fine luglio, discussione fine agosto (<https://master-lascalea.eu/programme/intership>). Può essere svolto in **qualsunque** sezione INFN
 - Incontro di presentazione attività INFN a settembre (online)
 - **Leggere tesi di laurea** (controrelatori) ad Agosto.
 - Far parte della **commissione** finale (grazie A.Mostacci e M.Migliorati!)



**Thank you for your
attention**