

# Dottorato in Fisica degli acceleratori

**Gianluca Cavoto** - *Sapienza Univ Roma and INFN Roma*  
*Incontro studenti primo anno*  
*25 nov 2024*

# Introduction

---

- ▶ PhD programme **dedicated** to the Physics of **Accelerators** both theoretical and experimental
  - ▶ **Unique** in Italy
  - ▶ Based in Sapienza but **national**
  - ▶ **Grants (40th)**: 6 INFN + 2 Sapienza
    - ▶ + 3 position with no grants
  - ▶ **Courses** teach principles of accelerator theory and its applications in different domains
    - ▶ Students **required** to **attend** both theoretical and hands-on courses at INFN labs
    - ▶ **Classes** can be attended **remotely (but NOT JUAS)**
  - ▶ **Research** activity can be done at your **home lab**
  - ▶ **Web site:** [https://phd.uniroma1.it/web/FISICA-E-TECNOLOGIA-DEGLI-ACCELERATORI\\_nD4093\\_IT.aspx](https://phd.uniroma1.it/web/FISICA-E-TECNOLOGIA-DEGLI-ACCELERATORI_nD4093_IT.aspx)  
(old:[https://phd.uniroma1.it/web/FISICA-DEGLI-ACCELERATORI\\_nD3504\\_IT.aspx](https://phd.uniroma1.it/web/FISICA-DEGLI-ACCELERATORI_nD3504_IT.aspx))

# Timeline for your PhD

---

- ▶ **First year (start on Nov 1st)**
  - ▶ Attend **classes**: 18 ECTS - about 6-8 hours/ECTS
  - ▶ Attend **seminars** (mandatory!)
  - ▶ Submit by end of Dec a **study plan** to be approved by the Scientific Board.
- ▶ **Second year**
  - ▶ (Beginning) Prepare a **thesis project**
  - ▶ (End) give a **seminar** on the status of the project
    - ▶ Admission to 3rd year by the Board
  - ▶ **Hands-on** training (LNF)
- ▶ **Third year**
  - ▶ **Work** on the PhD thesis project
  - ▶ Thesis **writing** and interaction with referee
  - ▶ Final seminar (three months before the **defence**)
    - ▶ Currently organising three slots for the defence : Jan - May and Sep.

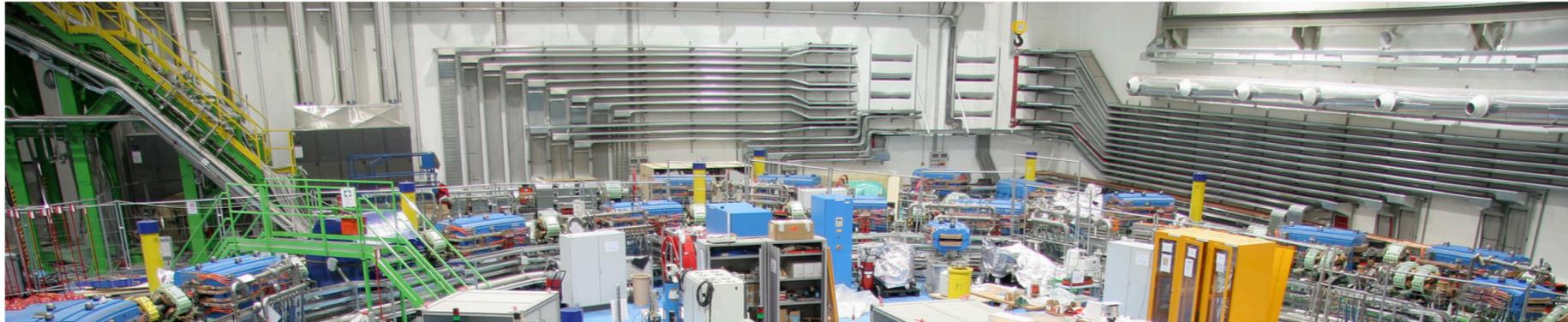
# Course and seminars

---

- **1<sup>st</sup> semester:**
    - **JUAS** (I and II courses) Jan-Feb. **Please register!**
  - 2<sup>nd</sup> semester (# ECTS)
    - M.Ferrario: “*Physics of High Brightness Accelerators*” (6), end Mar-Jun
    - M.Migliorati, A. Mostacci, E. Metral: “*Collective effects in circular accelerators*” (3) late spring
    - A. Pietropaolo - ENEA : “*Neutron production mechanisms, sources and applications*” (3)
    - G. Franciosini - V. Patera: “*Radiation-Matter interaction for medical physics*”, Mar-Jun (3)
    - S. Farinon - R. Musenich (INFN) “*Superconducting Magnets and applied cryogenics*” Mar-Jun(3)
    - S. Lupi - “*Radiation sources*” Mar-Jun(3) TBC
    - Seminars
  - **3<sup>rd</sup>, 4<sup>th</sup> semester:**
    - **Seminars + Hands-on (in presence at LNF during spring !)**
  - **5<sup>th</sup>, 6<sup>th</sup> semester:**
    - **Seminars**
  - In principle **courses from PhD and Master in Physics can be added** (need to be approved by the PhD board)
-

# Research topics

- ▶ Today's meeting is informative
- ▶ You might find a thesis project
- ▶ Also keep on eye on <https://acceleratori.infn.it/index.php/it/>



Istituto Nazionale di Fisica Nucleare | INFN  
Acceleratori - Accelerators

HOME COMITATO ▣ STRUTTURE ▣ RETI ▣ ATTIVITÀ E RICERCA ▣ SEMINARS & WORKSHOPS ▣

Benvenuto nel sito del gruppo di lavoro INFN Acceleratori



- ▶ <https://www.phys.uniroma1.it/fisica/archivionotizie/unsegno-contro-la-violenza-di-genere>
- ▶ <https://www.phys.uniroma1.it/fisica/archivionotizie/noi-ci-siamo>

