

DOTTORATO IN FISICA DEGLI ACCELERATORI

Daniele del Re

Sapienza Università & INFN Sezione Roma



SAPIENZA
UNIVERSITÀ DI ROMA



GENERAL INTRO

- PhD programme oriented to the **Accelerator Theory and Practice** (the only one in Italy)
- **Based at Sapienza Univ. but intended as a National PhD**
- **Funded by INFN**
- Lectures give **principles of the Accelerator Theory and to their applications** in the different domains of this science
- Students required to follow both **theoretical and practical lectures** in the INFN laboratories
- **Possibility to follow classes from remote**
- **Research activity can be performed in remote sites**
- **All info in**
 - **<https://web.infn.it/dottorato-fisica-acceleratori-roma/>**

PHD IN A NUTSHELL

- **First year:**
 - follow **classes**: total of about 144 hours (18 credits)
 - follow **seminars** (mandatory)
 - present (by December) **study plan** to be approved by the Teaching Board
- **Second year:**
 - prepare a **thesis project**
 - (end of the year) present a **seminar on the project**
 - based on both, **admission to the third year** by Board
 - **hand's on** training
- **Third year:**
 - work on **PhD thesis**
 - **final seminars** in October/November
 - **thesis defense** in ...

COURSES AND SEMINARS

- *1st semester:*
 - **M. Migliorati:** Longitudinal and transverse beam dynamics in Circular Accelerators (Oct. 29th - Dec. 19th , Mon. 9-11am and Wed. 4-6pm, aula seminari del dipartimento SBAI (RM004)
 - **JUAS** (I and II courses)
- *2nd semester:*
 - **M. Marocchino:** “Modelli Matematici Simulazioni PIC”, Mar-May
 - **M. Ferrario:** “Physics of High Brilliance Accelerators”, Mar-May
 - **A. Gallo:** “Accelerator Physics Laboratory” Apr-Jun
 - **Seminars**
- *3rd semester:*
 - **Seminars**
- *4th, 5th, 6th semester:*
 - **Hands-on**
- **More courses available (from PhD and Master in Physics)**
 - ▶ **Complete list (last year):** <https://web.infn.it/dottorato-fisica-acceleratori-roma/courses-and-seminars/>

THESIS TOPICS

- **Full list** available at
 - <https://agenda.infn.it/conferenceDisplay.py/abstractBook?confId=10822>
to be finalized/updated during next weeks
- **More will be discussed/presented today**

14:20 - 14:50	Tesi disponibili presso i LNF e SBAI in collaborazione con il CERN 30' Speaker: Roberto Cimino (LNF)
14:50 - 15:20	Tesi disponibili presso SPARC_LAB 30' Speakers: Massimo Ferrario (LNF), Federico Nguyen (LNF)
15:20 - 15:50	Tesi in ambito muon collider 30' Speaker: FRANCESCO COLLAMATI (ROMA1)
15:50 - 16:10	Terahertz Acceleration of Particles 20' Speakers: Massimo Petrarca (ROMA1), Stefano Lupi (ROMA1)
16:10 - 16:30	Altre tesi 20' Speakers: Vittoria Petrillo (MI), Dr. Marco Pullia (CNAO), Dr. Fabrizio Murtas (LNF)