## PhD IN PHYSICS OVERVIEW

### IN BRIEF

**Lines of research**
1. Nuclear and subnuclear physics
2. Astrophysics
3. Condensed matter physics
4. Theoretical physics
5. Medical physics and biophysics

**Administrative location**
University of Trieste

**Organizing Department**
Department of Physics

**Duration**
3 years

**Attendance abroad that entitles to a scholarship increase - min. max. of months for each PhD student (over 3 years)**
0 - 18

**Official language**
English
Lectures, Seminars and Exams will be entirely in English

**Subject Area**
02 PHYSICS

**Macro Research Fields**
(in alphabetical code order)
- 02/A PHYSICS OF FUNDAMENTAL INTERACTIONS
- 02/B PHYSICS OF MATTER
- 02/C ASTRONOMY, ASTROPHYSICS, EARTH AND PLANETARY PHYSICS
- 02/D APPLIED PHYSICS, DIDACTICS AND HISTORY OF PHYSICS

**Scientific Disciplinary Sectors**
(in alphabetical code order)
- FIS/01 EXPERIMENTAL PHYSICS
- FIS/02 THEORETICAL PHYSICS, MATHEMATICAL MODELS AND METHODS
- FIS/03 PHYSICS OF MATTER
- FIS/04 NUCLEAR AND SUBNUCLEAR PHYSICS
- FIS/05 ASTRONOMY AND ASTROPHYSICS
- FIS/07 APPLIED PHYSICS (CULTURAL HERITAGE APPLICATIONS, MEDICAL PHYSICS AND BIOPHYSICS, ENVIRONMENTAL PHYSICS)

**Domain European Research Council**
PE PHYSICAL SCIENCES AND ENGINEERING

**ERC Panels**
- PE2 FUNDAMENTAL CONSTITUENTS OF MATTER: PARTICLE, NUCLEAR, PLASMA, ATOMIC, MOLECULAR, GAS, AND OPTICAL PHYSICS
- PE3 CONDENSED MATTER PHYSICS: STRUCTURE, ELECTRONIC PROPERTIES, FLUIDS, NANosciences, BIOLOGICAL PHYSICS
**WHO’S WHO**

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<tr>
<th><strong>Chair</strong></th>
<th>Prof. Francesco Longo - Department of Physics – University of Trieste - phone +39 040.558.3381 - +39 040.375.6222; email <a href="mailto:francesco.longo@ts.infn.it">francesco.longo@ts.infn.it</a></th>
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<td><strong>Vice</strong></td>
<td>Prof. Roberto Valandro - Department of Physics – Str. Costiera – University of Trieste - tel. +39 040 2240364, email <a href="mailto:Roberto.Valandro@ts.infn.it">Roberto.Valandro@ts.infn.it</a></td>
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<td><strong>PhD Academic Board</strong></td>
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| **Course description and objectives** | Graduates will possess an advanced and deep knowledge of their own research area of specialization. They will be highly skilled in using advanced scientific experimental/observational/computational/theoretical methods and/or tools appropriate to their area of specialization. The most important outcome of their PhD will be the ability to perform independent and innovative research, developing a critical thinking, the capability of working in an advanced and international research environment. They will be able to carry out an original scientific work at the leading edge of their field, producing a high quality written dissertation. Graduates will be able to summarize the main issues in their field and communicate the results of scientific research at a professional level as well as to other students. The research fields of activity of the Graduate Course are: Nuclear and subnuclear physics, Astrophysics, Condensed matter physics, Theoretical physics, Medical physics and biophysics. |

| **Job placement opportunities** | Research activities in national and foreign universities, research centers and industry. Teaching in universities and secondary schools. Jobs which require high scientific expertise, both in the public and private sector. Employment data for our PhD show a very positive trend: for several years the students have been monitored for few years after the PhD diploma. Obtaining good post-doc positions at Italian or foreign Institutions, Universities or Laboratories is considered an indirect, but effective quality indicator of the PhD School. The PhD students employment areas include Italian universities, Foreign universities, Italian or foreign research institutes, High School teachers, Financial analysts, Programmers, Statistics experts in insurance companies, etc. |

| **Main cooperating international Universities and Research Institutions** | Centre Europeen de Recherche Nucleaire (CERN) - Geneva, Switzerland  
2. ESO GARCHING, Germany  
3. École Polytechnique Fédérale de Lausanne, Switzerland  
4. KEK, the High Energy Accelerator Research Organization - Japan  
5. Institute for Advanced Studies – Princeton, USA |