Dipartimento di Fisica e Astronomia Galileo Galilei

Università degli Studi di Padova

Daniele Mengoni

Dipartimento di Fisica e Astronomia “G. Galilei”

EMJD NucPhys -- Career orientation day

INFN PADOVA

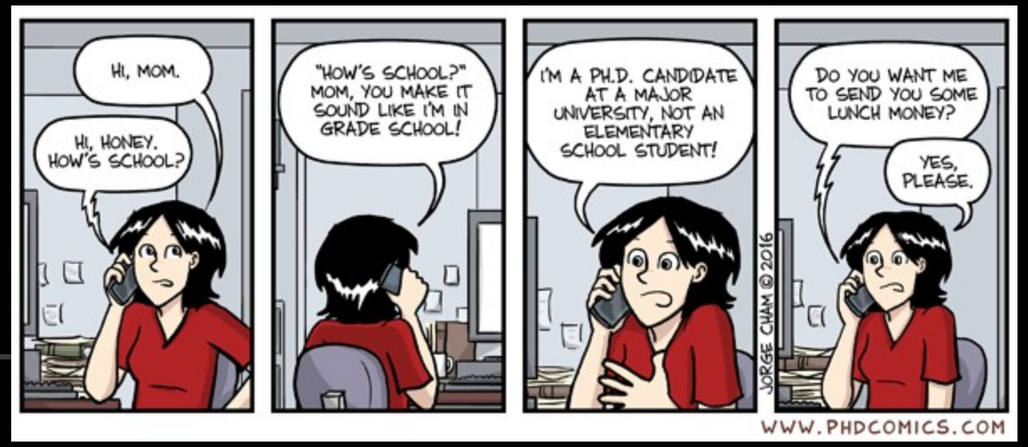
16 October 2026

Career Opportunities for International NucPhys Graduates



Exploring Paths in Padova & Across Italy

It seems abstract now.. so I try to be practical:
where, what and why you could be a valuable asset



… Nuclear Physics?









A Field Shaping Tomorrow

Nuclear physics stands at the intersection of **cutting-edge science,** driving revolutionary advances in sustainable **energy**, life-saving **medicine**, and more. Italy maintains a distinguished presence in nuclear research and high-tech industries, positioning itself as a European leader in this field.

The demand for multidisciplinary expertise—spanning physics, engineering, data analysis, and safety systems—continues to grow as the world addresses climate challenges and seeks innovative medical solutions.

INFN PADOVA

Research at Padova Division

How does nature work at its most basic and intimate level? What are the last constituents of the subject? These are the main questions to which our research aims to find answers.
After the war, the protagonists of the scene were the atomic nuclei, together with their proton and neutron constituents. This is why our Institute, founded in 1951, is called the National Institute of Nuclear Physics.
Today, fundamental physics has identified quark and leptons as the fundamental building blocks of matter and has built an extremely powerful model capable of accounting for an enormous amount of phenomena and experimental data.
However many questions remain unanswered to fully understand the origin, characteristics and fate of our universe.


Particle physics


Astroparticle physics


Nuclear physics


Theoretical physics


Technological and inter-disciplinary research

Premier Research Hub

Italy is leading nuclear physics research institute with a major presence in Padova, conducting groundbreaking experiments in particle physics

Vast Network

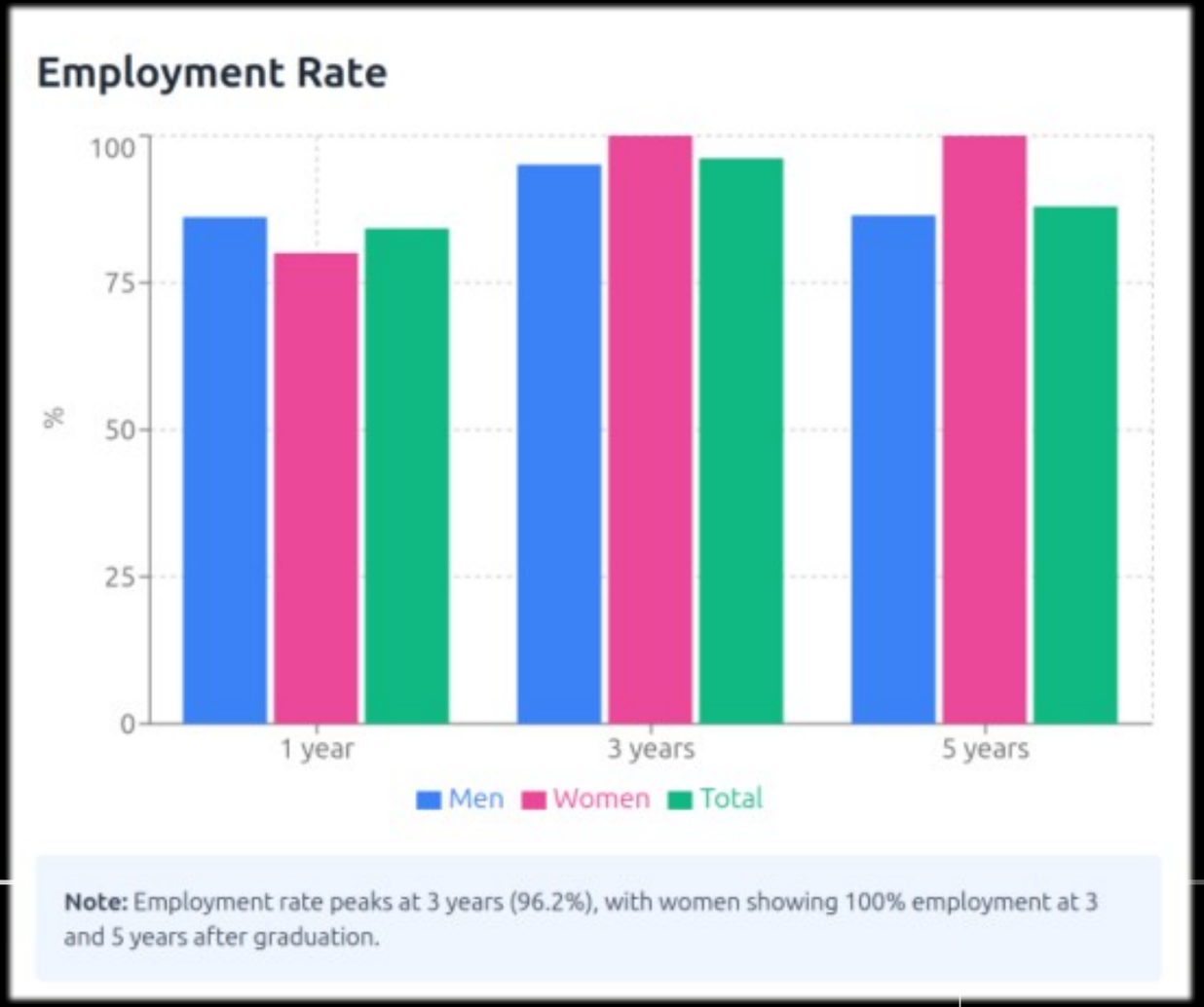
Over 6,000 associates and 2,200 employees as of 2024, with 25% being young researchers driving innovation

Open Positions

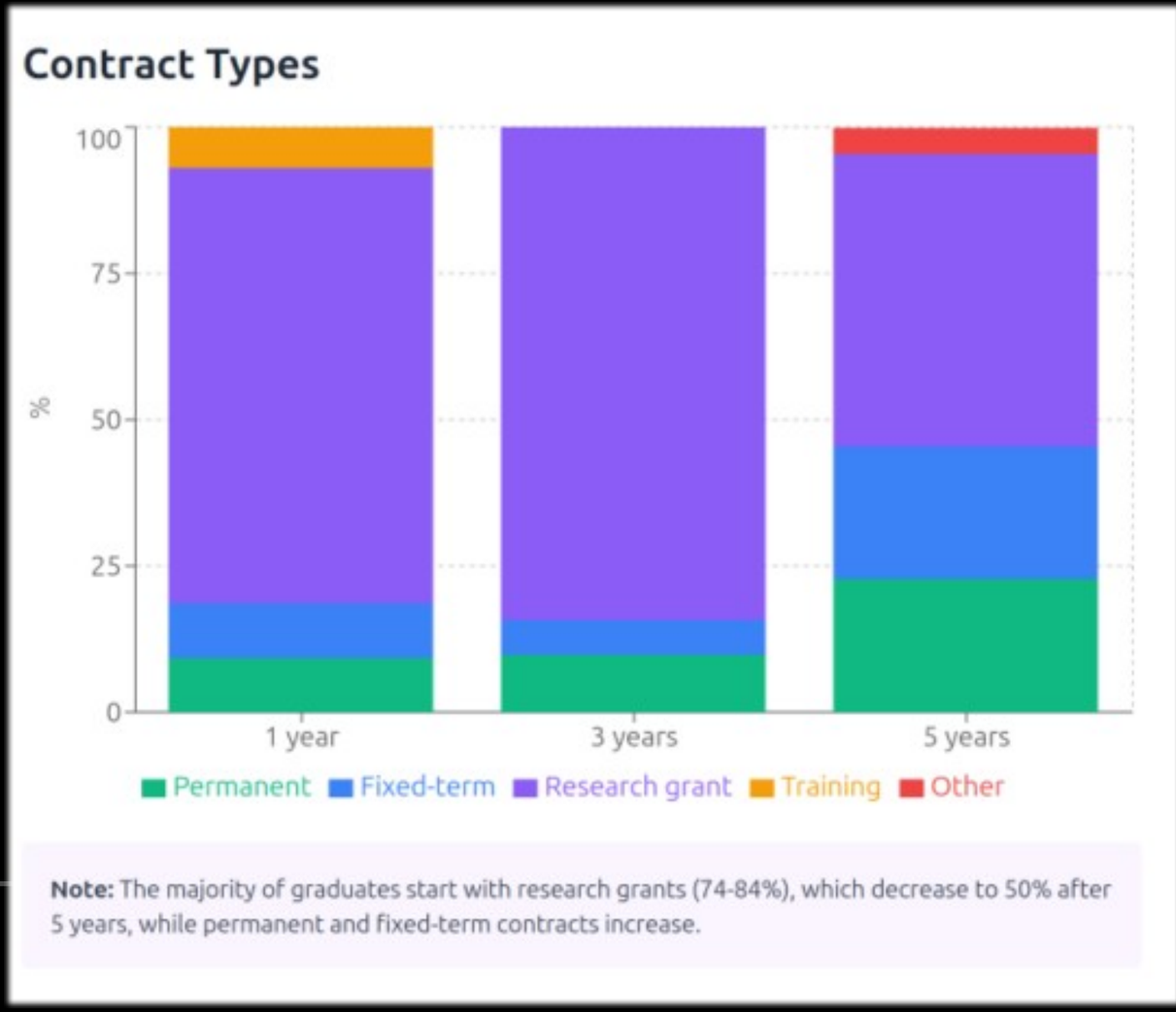
Regular public calls for research and technical positions available at www.infn.it/en/opportunita-di-lavoro

Nuclear physics + Career opportunities span experimental physics al large, advanced data analysis, computational modeling, and IT infrastructure experiments. INFN collaborates with CERN and other international facilities, giving access to global research networks.

Physics Graduates - University of Padova

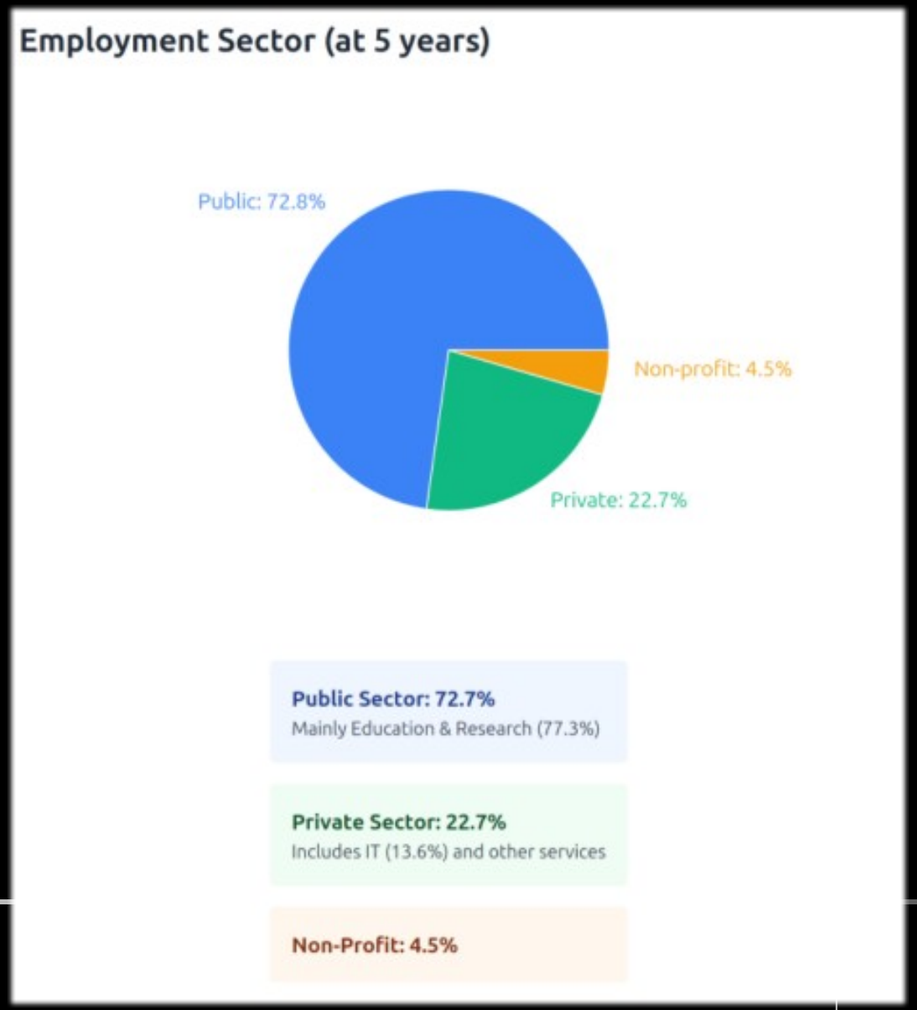


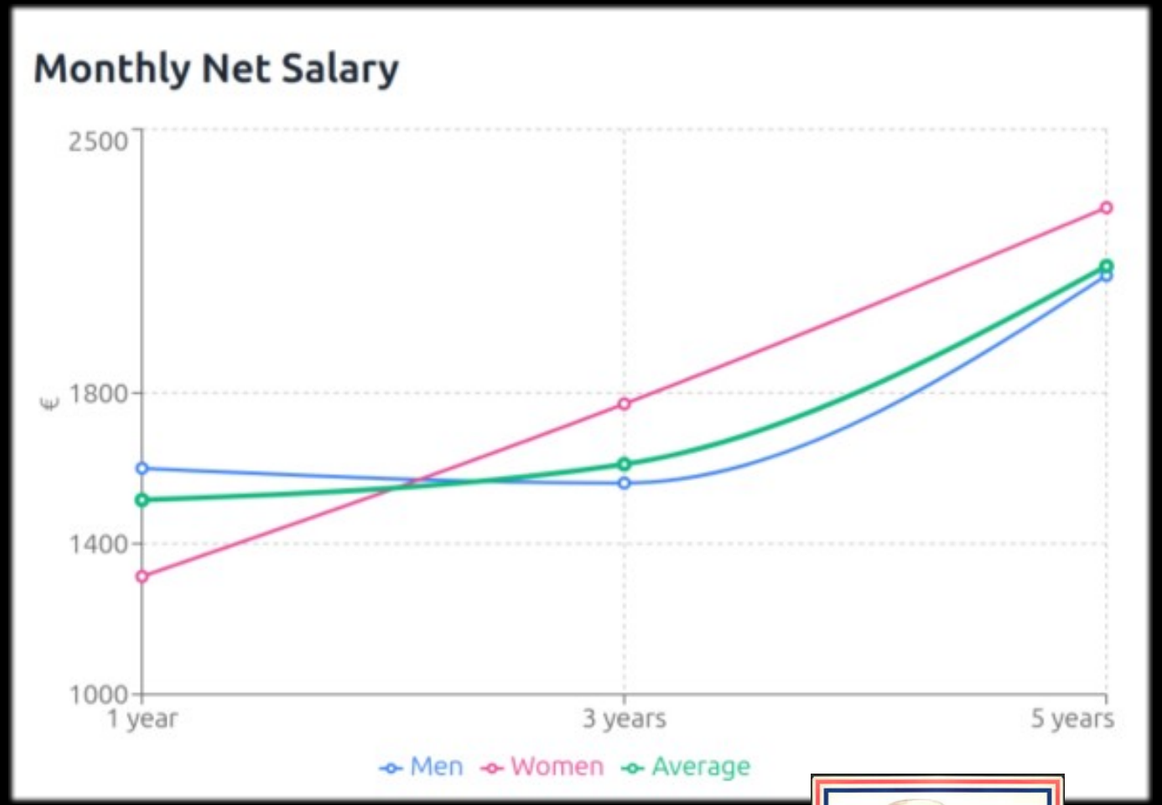
Note: Employment rate peaks at 3 years (96.2%), with women showing 100% employment at 3 and 5 years after graduation.



Note: The majority of graduates start with research grants (74-84%), which decrease to 50% after 5 years, while permanent and fixed-term contracts increase.

Physics Graduates - University of Padova

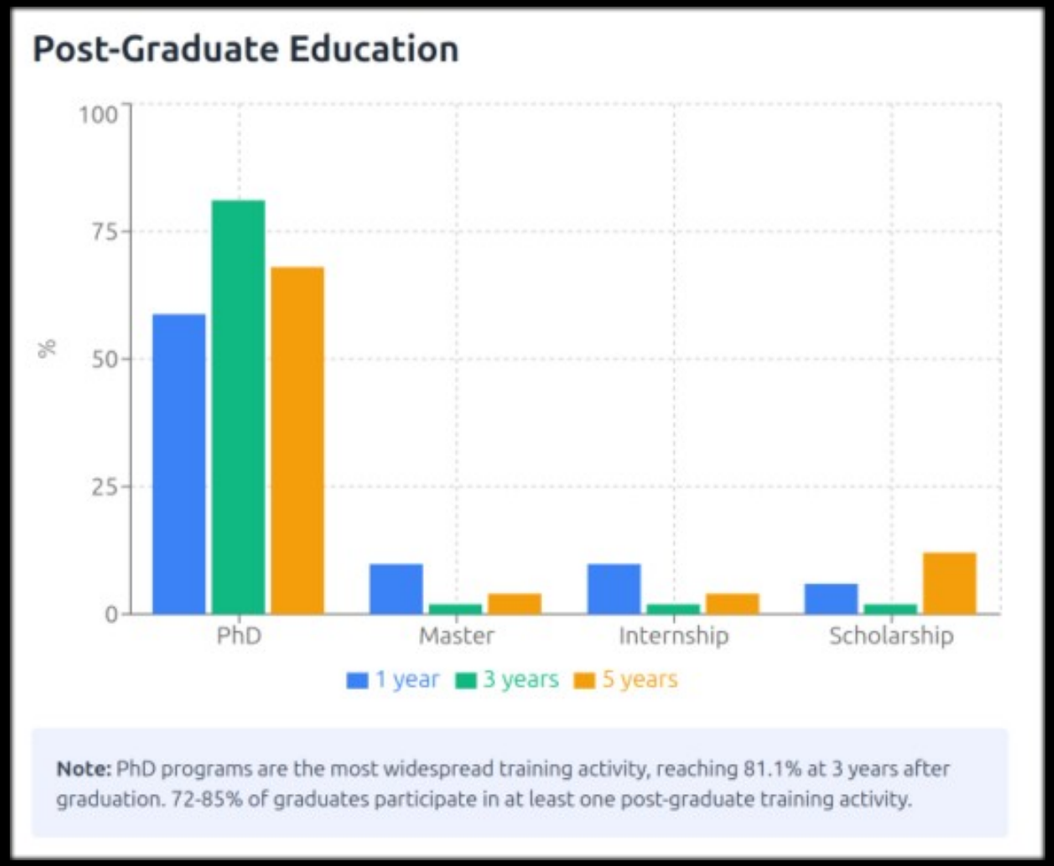




Consider that: even if a job posting doesn't say "nuclear physicist wanted " you background often fits perfectly



Physics Graduates - University of Padova

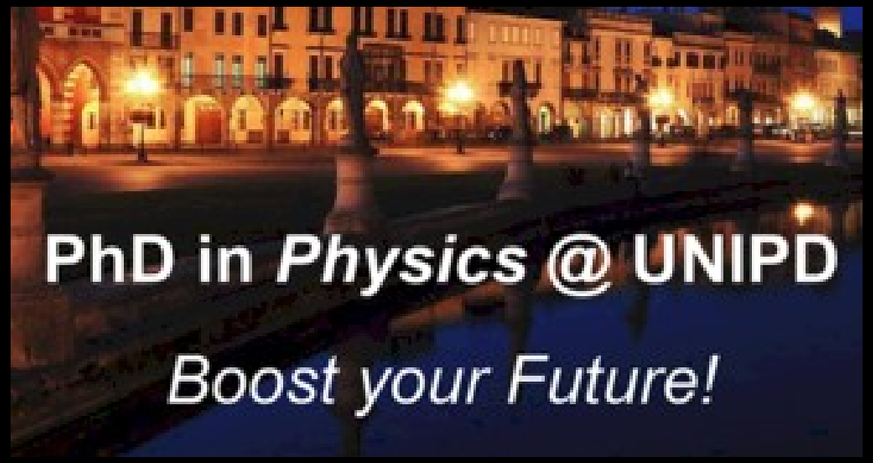


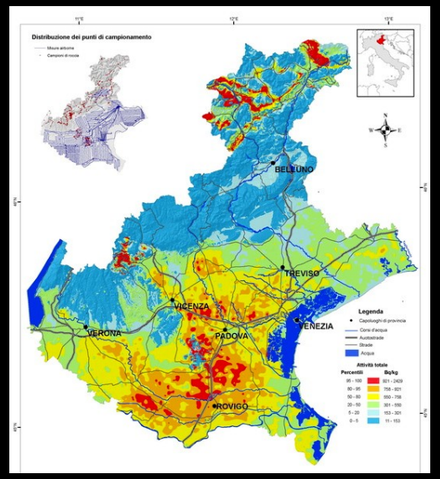
Average employment rate
89.5%

Working abroad (5 years)
40.9%

Degree effectiveness
88%

Time to find job
3.5 months







University of Padova & Regional Research Centers

01

PhD Programs

PhD programs (DEDICATED NucPhys GRANT) featuring world-class nuclear physics research groups with international faculty and cutting-edge facilities (LNL – INFN, CNR. INAF)



02

Applied Research Collaboration

Partnerships with regional entities focusing on applied technologies, medical physics applications (School in Medical Physics), environmental protection agencies (ARPA) and industrial innovations

03

Practical Experience

Access to internships and thesis projects directly linked to local firms, hospitals, research centers, and industry partners throughout the Veneto region

Hospitals & Medical Applications

Nuclear Medicine in Healthcare

The Veneto region, with Padova, hosts nuclear medicine departments across multiple hospitals. These facilities are at the forefront of diagnostic imaging and cancer treatment technologies.



Radio pharmaceutical Development

Contributing to next-generation diagnostic and therapeutic compounds

Radiation Safety & Protection

Essential roles ensuring patient and staff safety in medical environments



Advanced Diagnostic Imaging

PET, SPECT, and emerging imaging modalities requiring specialized physics expertise

University of Padova is also leading a School of Medical Physics, preparing to cover roles in the healthcare national system

Private Sector & Industry Opportunities





Leading Italian Companies

Organizations and firms like Ansaldo, Newcleo, Leonardo, Enel, NET, Caen and other Italian firms actively recruiting (nuclear) physicists with expertise in advanced technologies, safety, etcs

Fusion Energy & International Projects

ITER Organization

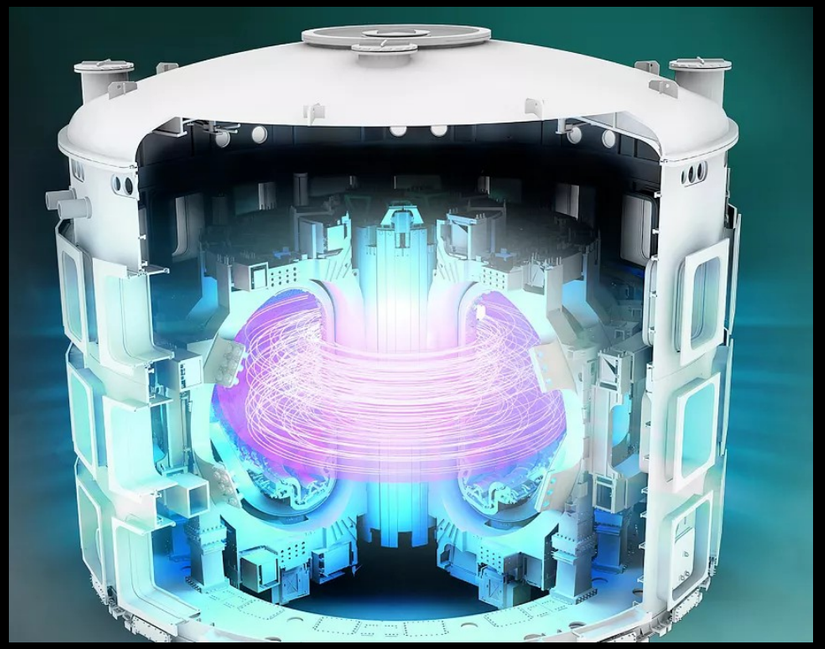
Located in Southern France, one of the world largest fusion experiment.

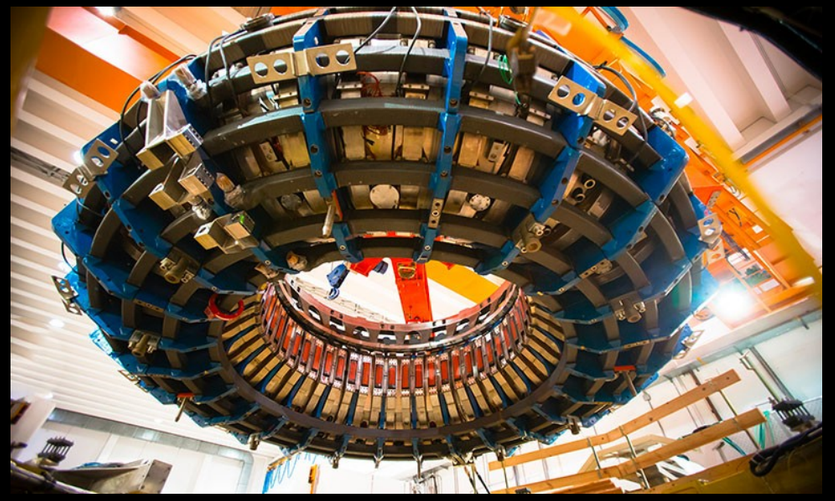
European Collaborations

Access fusion research partnerships through Italian institutions and EU framework programs. Research center at Padova, RFX CNR.

Emerging Career Paths

Opportunities in plasma physics, reactor design, materials science, and nuclear safety for next-generation energy





Career Development & Professional Recognition

What makes you as an International Nuclear Physics student attractive for the public/private job market?





Building Your Professional Profile

- Professional Qualification

  NucPhys International Master graduates have an enormous ground of expertise and qualifications already acknowledged in three countries

- International Networks

  Access to European and international research networks including ie ENEN (European Nuclear Education Network) database with opportunities across the continent

- Competitive Advantages

  Multilingual skills and interdisciplinary expertise are essential for global mobility and career advancement in international organizations

How to Access These Opportunities



Monitor Job Boards

Regularly check INFN and university job portals for calls, internships, and research positions. Never miss opportunities!



Build a Strong Portfolio

Develop a solid CV highlighting research projects, internships, publications, and technical skills relevant to nuclear physics applications and beyond.



Leverage Career Services

Engage with UNIPD Career Service and other platforms (ENEN) for broader European job openings and professional development resources.



Network Actively

Attend conferences, join professional societies, and connect with nuclear physics communities both in Italy and internationally.

Your Future ... Starts Here

Diverse Pathways

From fundamental research to healthcare innovation, industrial applications to international projects—your expertise opens countless doors

Lively Ecosystem

Padova and Italy offer a vibrant, collaborative environment for nuclear physics graduates with strong institutional support

Your Journey Begins Now

Take initiative: explore opportunities, submit applications, and actively connect with the community to shape your unique career path

daniele.mengoni@unipd.it

Thanks for your attention