



from the to smallest infinity

Study and Research Opportunities

Technische Universität München Physics Department

Why Physics at TUM?

Unlimited Research Opportunities

We cover all the fields of modern physics.

FUNDAMENTAL

APPLIED TECHNICAL

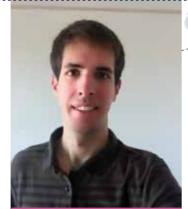
Biophysics Condensed Matter Physics

Nuclear, Particle and Astrophysics

Successful Career Path

Our students and researchers have the **strong analytical skills and experience** necessary for research in academia or industry – and are highly employable. Examples of positions our alumni hold:

- Cell Technology Specialist, BMW, Doctorate in Physics (2009)
- Consultant, PwC Strategy&, Master's in Applied and Engineering Physics and Keio-TUM Double Degree (2014)
- Project Manager for R&D, Infineon Technologies, Doctorate in Physics (2010)
- Head of Quality Management and Business
 Excellence, Siemens, Diploma in Physics (1994)
- Research Scientist, TRIUMF, Diploma (2004) and Doctorate (2008) in Physics
- Assistant Professor (since 2015), University of Waterloo, Master's in Engineering Physics (2004)
- Founder and Chief Executive Officer, Demoskopia, Master's in Biophysics (2013)



"The study plan is very flexible and you can take very different courses – good university, many research facilities to do a Master's thesis or doctoral research, and no tuition fees."

Santiago Varona Angulo from Spain, Master's in Nuclear, Particle and Astrophysics (2015)

Expansive Network

Internationally accomplished scientists gather in our department and associated neighboring institutions – **25+ on Campus Garching alone**. Our large number of international partners multiply your possibilities. We have 1.300 physics students, 20% international, and 400 doctoral candidates.

"As a physicist, you can be widely deployed in industry. Because of your strong analytical skills and persistency, you are great at solving complex problems. I am still very proud of having studied at the TUM Physics Department. Also, from an employer's perspective, I can strongly recommend it."

Dr. Thomas Goldbrunner from Germany, Diploma and Doctorate in Physics (1997), now Product Strategy at BMW Group

World-Class Facilities

Campus Garching is one of the biggest science and technology research campuses in Europe, and the largest number of its institutions are dedicated to physics. Whether it is a unique neutron source or an upcoming center for advanced laser applications or a new center of protein science, you will find everything you need to pursue your interests.

top 15 worldwide (QS physics ranking) 40+ research groups
from

€ 20 MILLION in external research funding from public sources each year



Broaden Your Horizons

STUDY

Master's Programs

- Master's in Applied and Engineering Physics (fully English-taught)
- Master's in Biophysics
- Master's in Condensed Matter Physics
- Master's in Nuclear, Particle and Astrophysics

International double degree and joint study programs are possible in combination with our Master's programs.

Bachelor's Program

Bachelor's in Physics (fully German-taught)

Exchange Programs

As a student from one of our 135+ Erasmus and TUMexchange partner institutions, you can enjoy...

- programs in physics
- Multidisciplinary study options through our neighboring departments

▶ 50+ English-taught courses from our Master's

- > Paid research assistantships (as available)
- Free German language courses
- Peers from top institutions around the world
- Vast range of German-taught courses

Our programs: www.ph.tum.de/academics



"Highly qualified professors and modern and well-equipped infrastructures – it has been a great experience."

Silvia Spiga from Italy, former exchange student from University of Cagliari, now a doctoral candidate at Walter Schottky Institute (WSI)

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RESEARCH

Doctoral & Postdoctoral

Our department has **400+ ongoing doctoral projects in research groups** all over campus. The standard lab language is English. We are well funded and support high-risk research.

Find the right fit for your research, whether through an **exchange semester** during your Master's thesis, **collaboration** during your doctoral work or a fully funded **Research Opportunities Week** after completion of your doctorate.

DIRECT TRACK OPTION – A GATEWAY TO DOCTORAL RESEARCH: Excellent students can apply for a combined Master's and Doctoral degree. Streamline your application and earn your doctorate earlier: www.ph.tum.de/direct

Short-Term Opportunities

See if we are a good fit by writing your final Master's thesis with us, choosing from our focused summer school options or contacting one of our research groups directly about doing an internship.

Our research: www.ph.tum.de/research

Dynamic & Collaborative Community

Our community is **international, inquisitive and engaging**, with an open dialog between students, researchers and professors – as well as a career mentoring program bringing students and alumni together.

TUM has all kinds of extracurricular **activities and events**, from summer music festivals to sporting events to international clubs – you will find people you connect with!

Munich is buzzing with the energy of top science and technology institutes and companies, drawing talent from across the globe. You can find restaurants for any taste, entertainment for any interest, Olympic-class sporting facilities and natural beauty – thanks to the nearby Alps and lakes – that everyone can enjoy. Munich is also compact, so you can get around without a car!

Life at TUM: www.tum.de/en/university-life

Experienced Support and Development Services

- Housing search assistance
- Language center
- UnternehmerTUM, Center for Innovation and Business Creation at TUM
- Student Fellow Program
- Financial aid
- Mentoring from alumni
- Career development
- Kids, family and elder care center



"In addition to the success in my scientific projects, I fondly remember the great German friends who brought me a life full of fun and happiness. Along with this, Munich is an internationalized city that provides you with all the aspects of a lively life."

Ali Aghebat Rafat from Iran, Master's in Applied and Engineering Physics (2014), now a doctoral candidate at the Center for Nanotechnology and Nanomaterials (ZNN)

Elite & Affordable

Degree programs have **no tuition fees**, and the small student fee (under 200€ per semester) gives you access to regional transportation and more. Summer program fees vary. As a student, you can apply for **student jobs, partial grants through TUM**, and DAAD **cost-of-living scholarships**.

ENTREPRENEURSHIP AT TUM AND UNTERNEHMERTUM, CENTER FOR INNOVATION AND BUSINESS CREATION

NO. **German university** in entrepreneurial support

700+ spin-offs/start-ups (since 1990) **14.000** jobs created by start-ups (since 1990)

1.500 m²

space where students gather, discuss ideas and create prototypes (*MakerSpace*)

Ask Us! Dr. Maria Eckholt (International Affairs), Dr. Martin Sass (Master's programs) and Dr. Karl Dressler (Bachelor's program) would be delighted to speak with you further about researching or studying at the TUM Physics Department.

study@ph.tum.de

Learn more and apply: **www.ph.tum.de**

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