

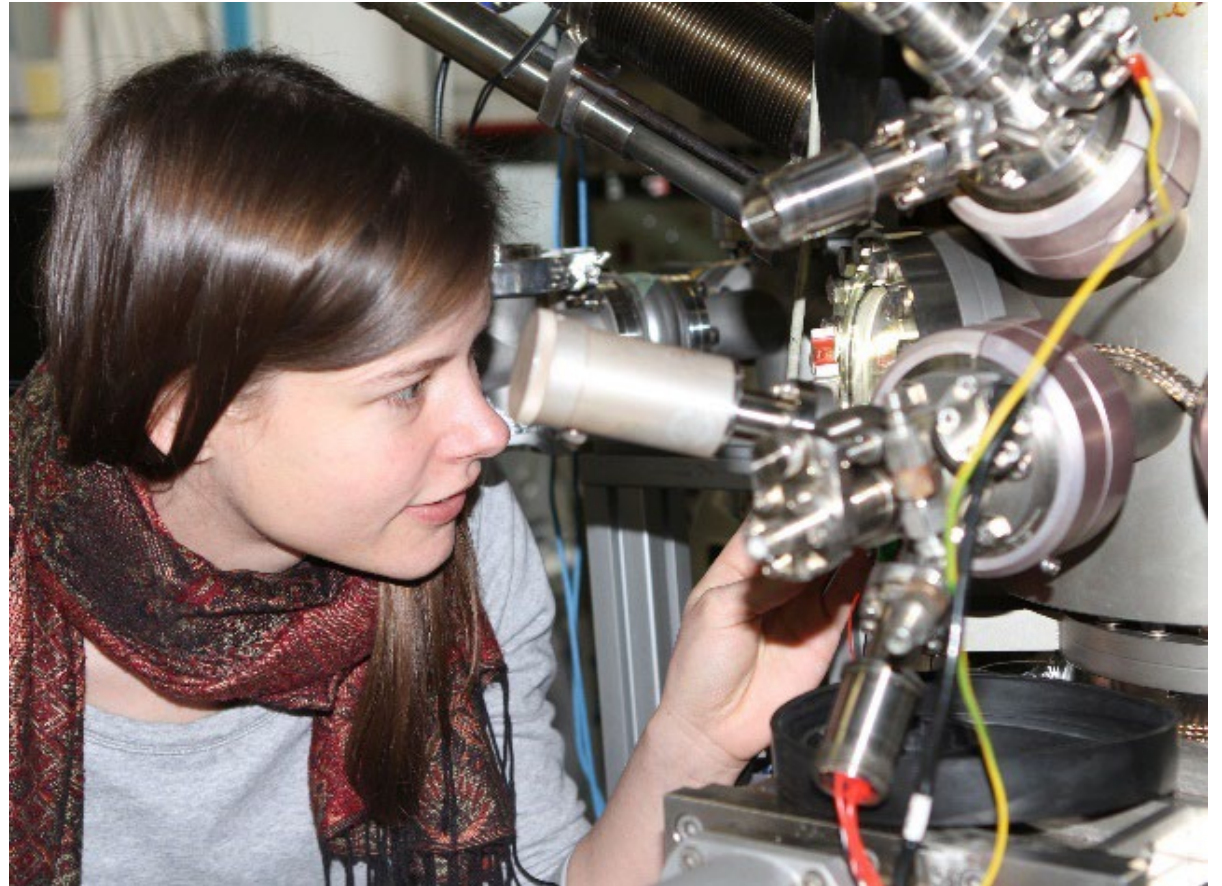


Master of Science in Physics

Graduate Program for International Careers in Research

Schedule

- University & Department
- Master of Science & French-German Double-Degree Master's Program
- Dates & Contacts
- Career Perspectives



About Freie Universität Berlin

- public university
- no tuition fees
- excellent research



About Department of Physics

- 75 years of expertise
- 30 research groups
- 200 master students, 60% from abroad

Global Ranking by Subject

- No. 89 in the THE Ranking (2023)
- No. 113 in the QS Ranking (2024)

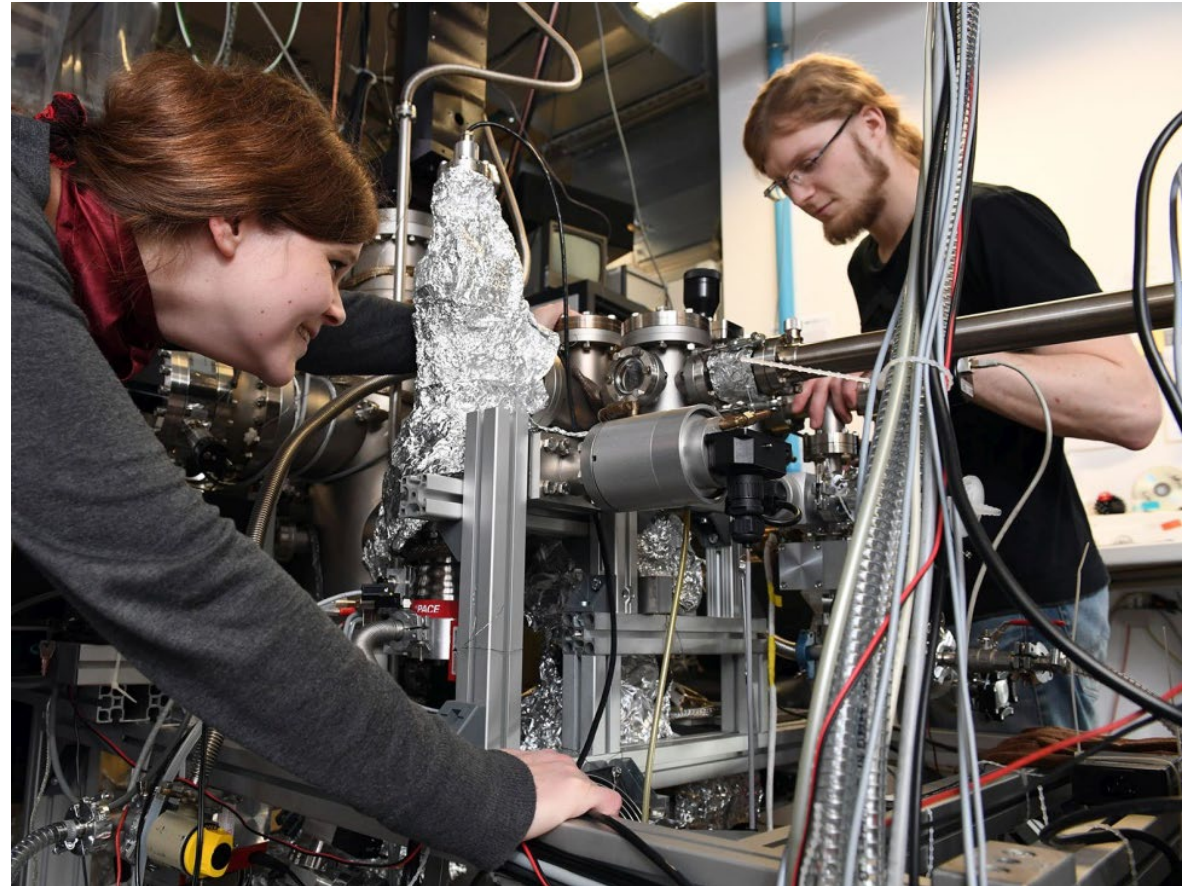


© David Ausserhofer

Program's Structure

Masters Program

- English only
- 4 semesters
- research-oriented



Requirements

- at least B2 English language proficiency
- no GPA
- equivalent B. Sc. in Physics



Program's Structure

Advanced Phase

- 2 semesters
- lab courses
- lectures & seminars

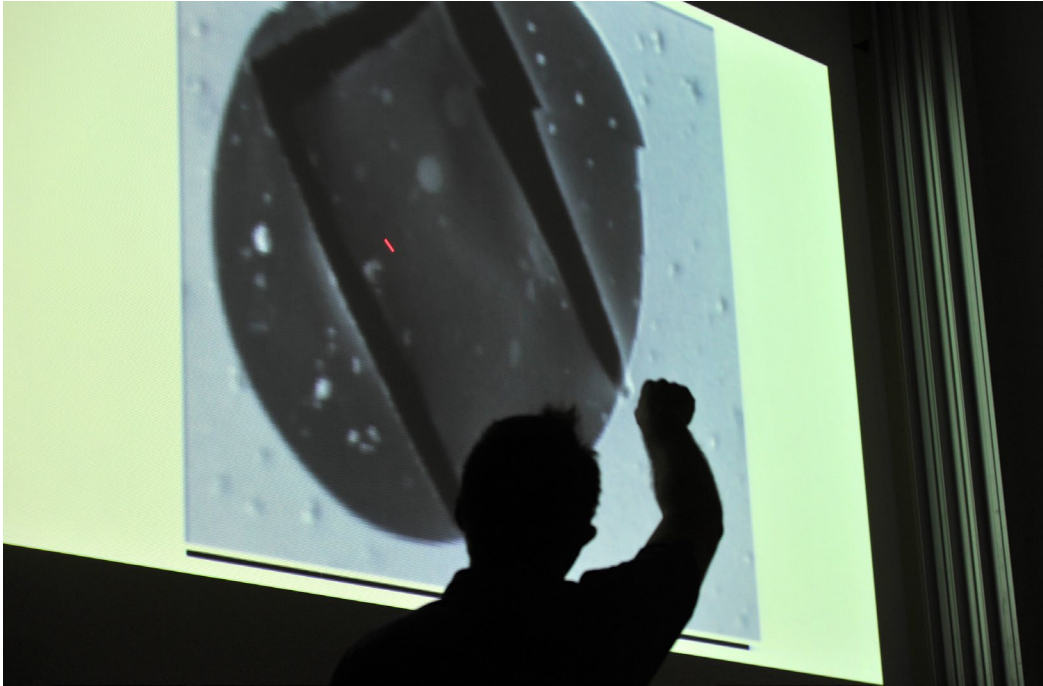


Research Phase

- 2 semesters
- join a research group
- master thesis

Courses

Lectures



Seminars



Lab Courses

Some experiments

- Pulsed Nuclear Magnetic Resonance (NMR)
- Photoelectron spectroscopy (PES)
- Raman Scattering
- ...



Recommended schedule

2.1. Sample programme plan for the Master's degree programme in Physics

The modules of the first and second semesters may be taken in any order. Students are recommended to divide the work load evenly between the two semesters.

1st semester 30 CP	2nd semester 30 CP	3rd semester 30 CP	4th semester 30 CP
Advanced phase		Research phase	
Compulsory module Advanced Laboratory Course for Master Students (10 CP)	Compulsory module Selected Topics in Physics (5 CP)	Compulsory module Scientific Specialisation (15 CP)	Master's thesis with accompanying seminar (30 CP)
Compulsory elective area 20 CP (at least one module from Theoretical Physics 10 CP)		Compulsory module Methodology and Project Planning (15 CP)	
Elective area 10 CP	Elective area 15 CP		

Study Regulations

www.physik.fu-berlin.de/master

Homepage > Study > Master of Science

Master in Physics

- Degree - Master of Science (M. Sc.)
- Research-oriented
- Following on the Bachelor
- Provides entry into doctoral programs
- Duration - 4 semesters
- Language - English
- Beginning - winter and summer semester
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Students acquire specialized knowledge in diverse fields of physics, deepen their understanding of scientific methods and strengthen their expertise in theoretical and experimental physics.

Excellent research community

- As a master student, you will be a part of the cutting-edge research at our university.
- You will receive individual support from instructors and professors.
- You will benefit from our well-equipped laboratories and international networks.

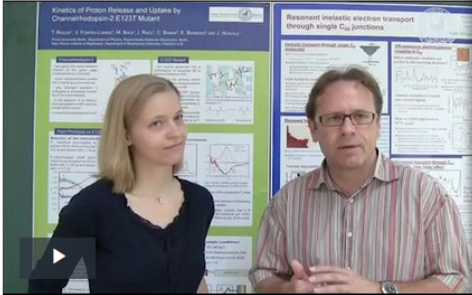
Requirements

- Bachelor of Science in Physics or similar degree*
- [Certified](#) English language proficiency at level B2 or higher

* Your bachelor's degree must be [equivalent](#) to the bachelor's degree in physics of the Freie Universität Berlin

[Apply for Master's Program](#)

Graduate in Physics



Prof. Dr. Katharina Franke and Prof. Dr. Joachim Heberle

Physics Master's Program — Unleash a Scientist Inside of You

If you admire the complexity of things and strive for new cognitive challenges every day, then you will fit right into our community. Our students and graduates have curiosity in their blood and the perpetual question "Why?" in their minds. The research topics inside the department include quantum computing, nanoscience, biological nanomaterials, quantum information, and many others.

DOCUMENTS AND LINKS

Please note that only German versions are legally binding.

- [Study regulations for the Master's Programme in Physics - English, 2020](#)
- [Access Statute - German, Zugangssatzung, 2022](#)
- [General Information Concerning Application for Master's Programs](#)
- [List of non-physics courses in elective area - English](#)
- [Study Plan during your Master's: first year](#)
- [Form Research phase registration - English, please print double-sided](#)
- [Form Exam "Scientific Specialization" - German](#)
- [Recommendations: Good scientific practice for reports and theses](#)
- [Scientific Integrity](#)
- [Flyer Masters' Program in Physics](#)

Study Regulations

1. Compulsory area

Compulsory area

Module: Advanced Laboratory Course for Master Students				
University/Department/Teaching Unit: Freie Universität Berlin/Physics/Physics				
Responsible for the module: Module lecturers				
Admission requirements: none				
Qualification aims: The students have mastered more complex issues in physics. They are familiar with and can apply the more advanced experimental methods used in current physics research to solve these issues. They are able to master a new field of work in a short time from current specialist literature and to communicate it comprehensibly in presentations.				
Content: Study of literature as introduction to a new field; close study of physics issues, modern experimental methods and measurement technologies; documentation of experimental process; critical evaluation and discussion of findings; written presentation of issues, evaluation and findings; presentation and explanation of experimental methods, their possibilities and limitations. Topic fields: solid state physics (magnetism, surface physics, superconductivity), atomic and molecular physics, nuclear physics, biophysics.				
Teaching and learning units	Compulsory attendance (Semester hours per week = SH)	Forms of active participation	Study time (hours)	
Practical	6	Carrying out and documenting practical experiments	Attendance at practical (P) Practical (P) preparation and follow-up	90
Seminar	2	Lecture of approx. 20 minutes, participation in discussion		150
			Attendance at seminar (S) Seminar (S) preparation and follow-up	30
				30
Module examination		none		
Module language		English (or German)		
Compulsory regular attendance		Yes		
Study time, total hours		300 hours		10 CP
Duration of module		One semester		
Module offered		Every semester		
Application		Master's degree programme in Physics		

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Research Focus

DEPARTMENT OF PHYSICS

STUDY

RESEARCH

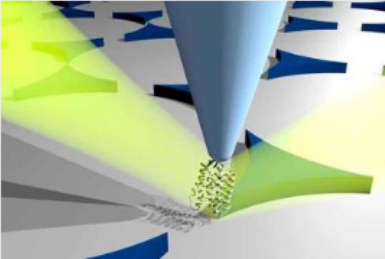
DEPARTMENT

SERVICES

[Homepage](#) > [Research](#)

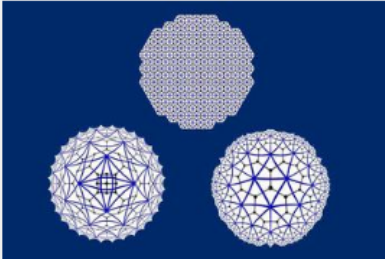
Fundamental Physics Research

The department traditionally focuses on basic research in experimental and theoretical physics. In physics education, we develop innovative concepts and methods for teaching Physics.



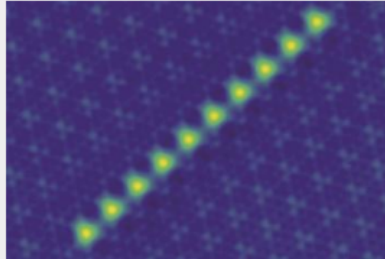
Biophysics

We describe physical processes within biological systems and uncover functions of biological macromolecules.



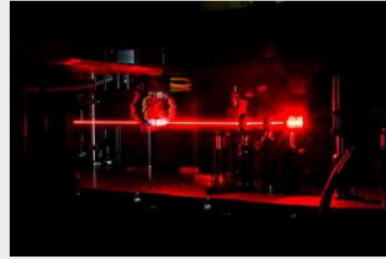
Quantum Physics

We study the laws of nature at the atomic and subatomic level and research on complex quantum systems.



Nanophysics and Surface Science

We analyze properties that materials exhibit at a structural size of a few nanometers and create new composite materials.



Ultrafast Physics

We use femtosecond laser pulses with wavelengths ranging from the terahertz to the x-ray regime to research extremely fast processes in magnetic materials and biological molecules.

Research Focus

www.physik.fu-berlin.de/research



Research Group Bolotin

› Quantum nanoelectronics of 2D materials



Research Group Kuch

› Spectroscopy and spectromicroscopy of new magnetic materials



Research Group Dau

› Biophysics and Photosynthesis



Research Group Reissig

› Molecular Biophysics with focus on Photonic Materials



Research Group Elsaesser

› Experimental Biophysics and Space Sciences



Research Group Reich

› Physics of Nanostructures



Research Group Franke

› Experimental Nanophysics



Research Group Schlesinger

› Genetic Biophysics



Research Group Fumagalli

› Thin Films - Near-field Optical Microscopy



Research Group Weinelt

› Ultrafast Surface Dynamics

Scientific Network

Adjunct Professors

- Dr. Silke Christiansen, Adjunct Professor, Fraunhofer IKTS
- Dr. Klaus Lips, Adjunct Professor, HZB
- Dr. Marc Vrakking, Adjunct Professor, MBI
- Dr. Beatriz Roldan Cuenya, Adjunct Professor, FHI / MPG
- Dr. Hans-Joachim Freund, Adjunct Professor, FHI / MPG
- Dr. Gerard Meijer, Adjunct Professor, FHI / MPG
- Dr. Heinz-Eberhard Mahnke, Adjunct Professor, HZB
- Dr. Jürgen Renn, Adjunct Professor, MPG
- Dr. Matthias Scheffler, Adjunct Professor, FHI / MPG
- Dr. Martin Wolf, Adjunct Professor, FHI / MPG
- Dr. Michael Giersig, Adjunct Professor
- Dr. Dirk Manske, Adjunct Professor, MPI



Fraunhofer Institute for Ceramic Technologies
and Systems IKTS



MAX BORN INSTITUTE
for Nonlinear Optics and Short Pulse Spectroscopy



FRITZ-HABER-INSTITUT
MAX-PLANCK-GESELLSCHAFT



MAX PLANCK INSTITUTE
FOR SOLID STATE RESEARCH

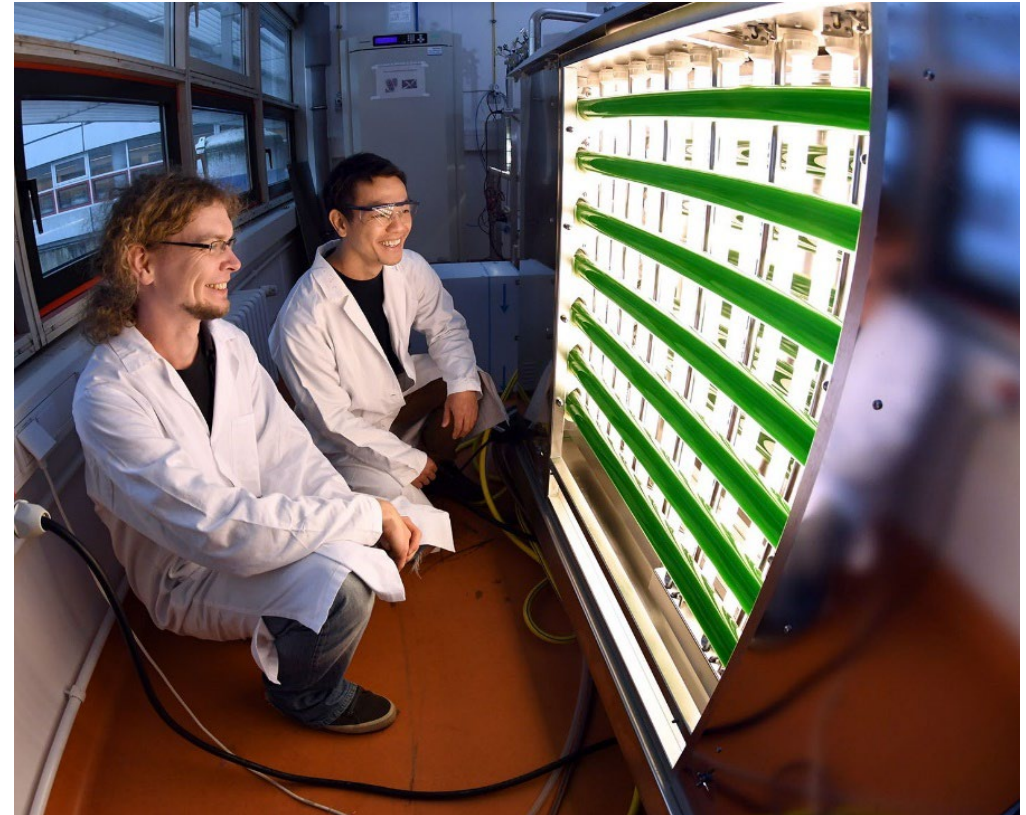
BESSY II - Electron Storage Ring

Measuring times blocked for Freie Universität Berlin



Working side by side with scientists

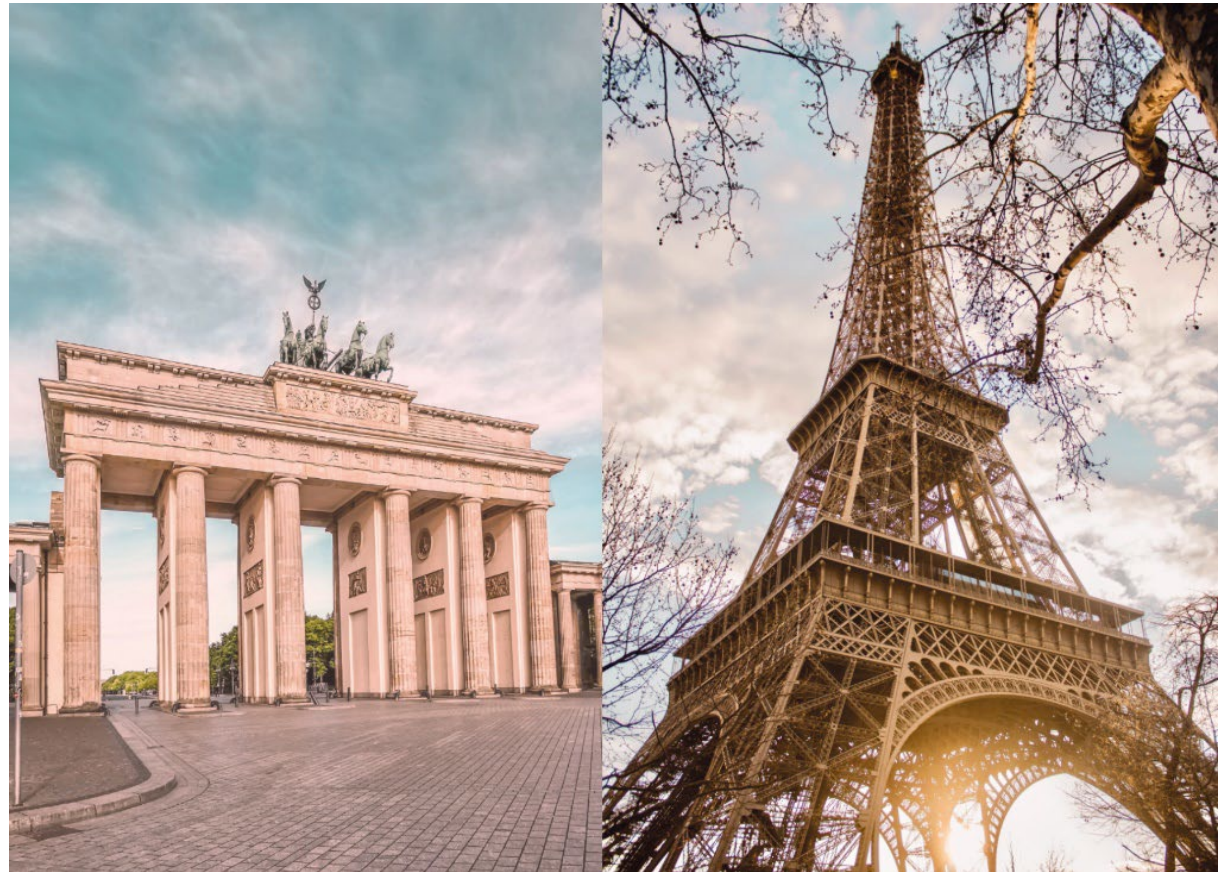
- qualifying for international scientific career
- encouraging and supportive
- learn German for free
- freedom



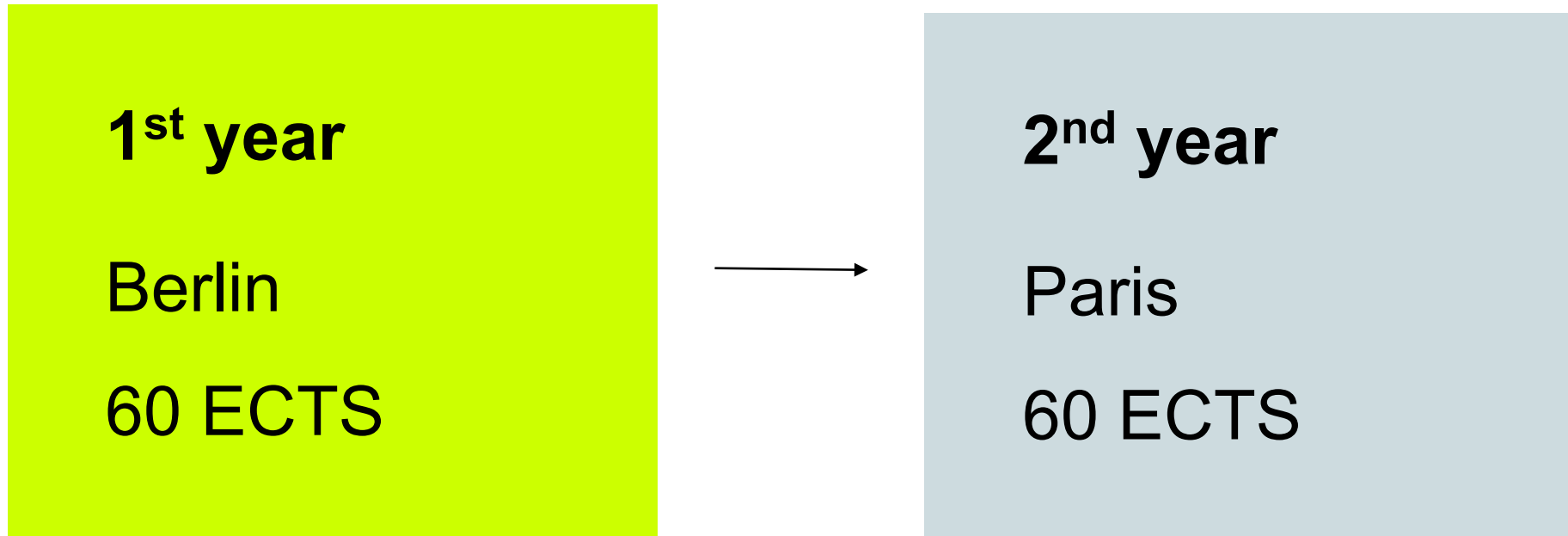
Double Degree

French-German Master's Double-Degree

- Two diplomas in one program
- Institut Polytechnique de Paris
+ Freie Universität Berlin

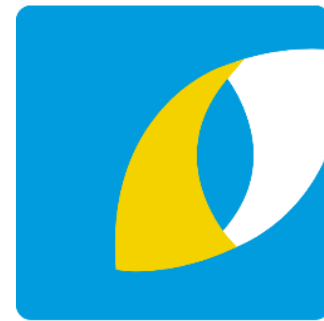


French-German Master's Double Degree



French-German Master's Double Degree

- mandatory enrollment as FU student
- program in English
- German and French at least A2 GeR
- double application (Freie Universität and IP)



Université
franco-allemande
Deutsch-Französische
Hochschule

Application, Dates & Contacts

Application

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[Apply for Master's Program](#)

Application period: 15.04.2024 – 15.08.2024

Application Period

Winter semester 2024/25

15.04.2024 - 15.08.2024

Summer semester 2025

01.12.2024 - 15.02.2025

Hurry up!

- 6 weeks in advance
- transcript of 2/3 of records

The logo for 'iun assist' features the letters 'iun' in a small, black, sans-serif font, followed by 'assist' in a larger, bold, black, sans-serif font. Above the 'i' in 'assist' are three colored dots: black, red, and yellow.

Student advisory

Leo

studienberatung@physik.fu-berlin.de

Friday 1-2 pm

Online counselling available!



Master's Program Coordinator

Prof. Dr. Kirill Bolotin

masterstudium@physik.fu-berlin.de



Career Perspectives

Postgraduate Program

www.physik.fu-berlin.de/phd-physics

DEPARTMENT OF PHYSICS

STUDYRESEARCHDEPARTMENTSERVICES

Homepage > Study > PhD in Physics

Doctorate Studies in Physics

PhD in Physics

- Degree - Dr. rer. nat
- Qualification for an in-depth scientific work
- Duration - approx. 4 years
- Language - German or English
- Beginning - at any time

Excellent international research community



- supportive and trusted working atmosphere
- cooperation with national and international research institutions
- measuring times at the synchrotron BESSY II reserved for Freie Universität
- additional qualification at the [DRS](#) possible

Requirements

- Degree as Master of Science or Diploma
- You have already found an open doctoral position in one of our research groups.

[Our research](#)

Doctoral Program at Freie Universität



Career Perspectives

22.05.2024
permanent
positions
open

Bundesagentur für Arbeit
bringt weiter.

Suche Anmelden Menü

Startseite > Jobsuche > Ihre Suche

Vormerkungen Stellensuchen

Jobsuche

Was suchen Sie?

Arbeit **physik**

Wo suchen Sie? **Umkreis**

z.B. Ort, PLZ, Bundesland, Land

Stellen finden

Suche speichern | Jobs per E-Mail

946 Jobs für physik

Filter einblenden Unbefristet x

Sortieren nach: **Relevanz**

Ingenieur/in - Physik

1. Versuchingenieur (m/w/d)
MANNDECKUNG GmbH
Reutlingen
ab sofort
Vor 4 Tagen

Ingenieur/in - Physik

2. Versuchingenieur (m/w/d)
MANNDECKUNG GmbH
Reutlingen
ab sofort
Vor 4 Tagen

stepstone

Login Menü

Physik Ort hinzufügen

+ Schnelle Bewerbung 392 + Erscheinungsdatum + Home-Office-Opti

1.071 Treffer für Physik Jobs

Dr. rer. nat. Physik – AFM / Optik (m/w/d)
Professional Scientists GmbH & Co. KG Großraum Stuttgart
Teilweise Home-Office Gehalt anzeigen
vor 1 Stunde

Ingenieur für Strahlenschutz-Physik (m/w/d)
EWN Entsorgungswerk für Nuklearanlagen GmbH Rheinsberg
Gehalt anzeigen
vor 22 Stunden

Medizinphysikexperte/in (m/w/d)
Referenzzentrum Mammographie Nord Oldenburg
Teilweise Home-Office Gehalt anzeigen
Schnelle Bewerbung
vor 5 Tagen

Career Perspectives

Johann Egger

Secureenergy, Project manager
for commercial scale PV-
projects



Dr. Mathias Mews

Bosch, Development Engineer



Dr. Stefanie Kreft

Mechanical Engineering, industrial
sealing technology
Senior Director Digital Engineering;



Career Perspectives

Matts Nissen

KPMG, Senior Associate
Financial Services – Risk &
Treasury



Dr. Lea Bogner

Physicist as technology transfer
advisor



Dr. Bianca Lim

Institute for Solar Research,
Strategic Planning/Business
Development

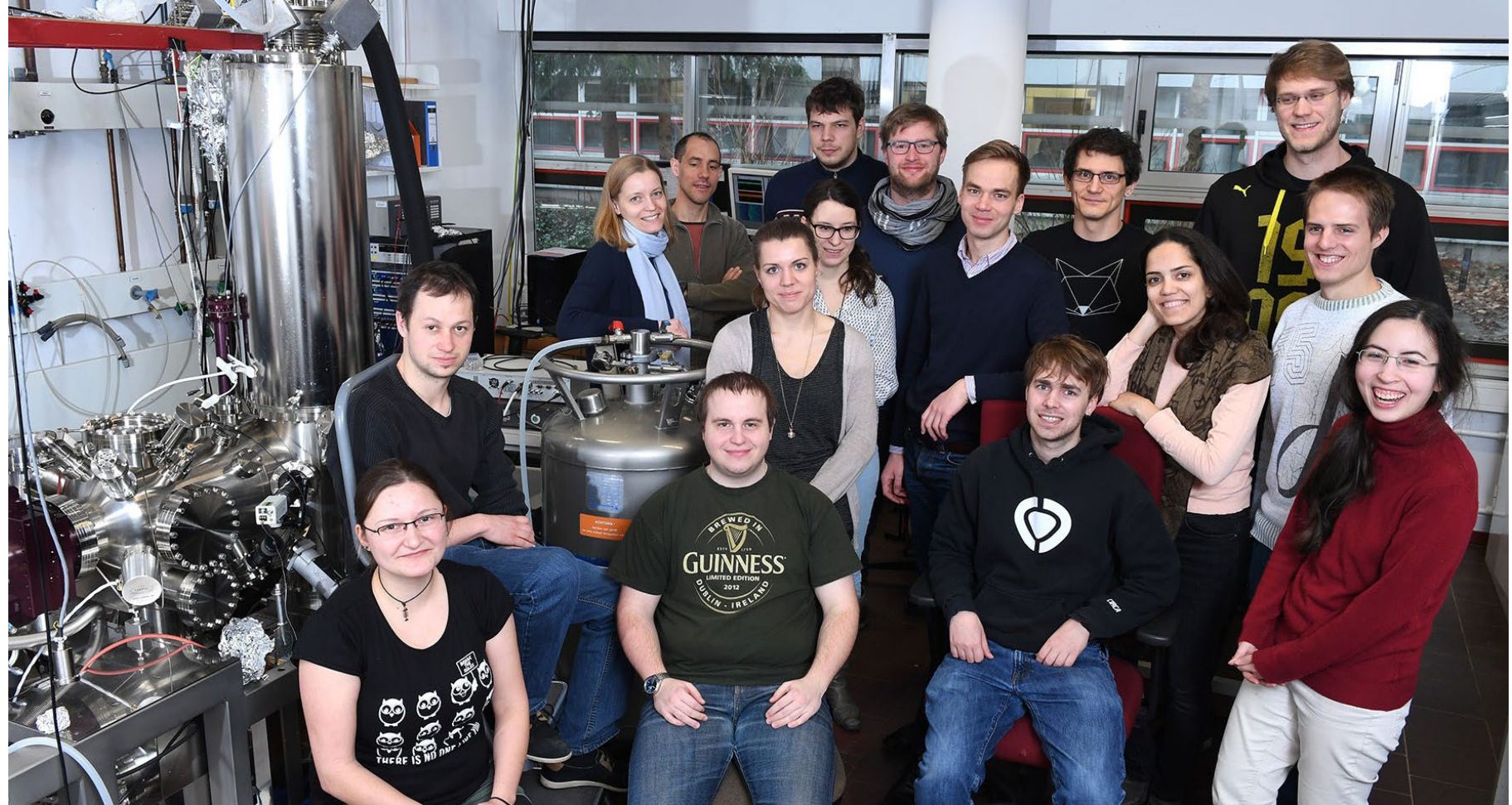


Career Perspectives



www.physik.fu-berlin.de/pathways

Be a Part of our **Physics Community!**



Campus Life

- sports
- parties



Living in Berlin

Start looking for a flat in advance!



Looking forward to seeing you!

