Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

RESEARCH ASSOCIATE FOR INTERNATIONAL MAX PLANCK RESEARCH SCHOOL FOR ULTRAFAST IMAGING & STRUCTURAL DYNAMICS - IMPRS UFAST – HAMBURG" 29 INTERDISCIPLINARY DOCTORAL PHD PROJECTS IN ULTRAFAST SCIENCE AND QUANTUM MATERIALS - § 28 SUBSECTION 3 HMBHG

Institution: Faculty of Mathematics, Informatics and Natural Sciences, Cooperation with the Max Planck Institute for the Structure and Dynamics of Matter (MPSD), EuXFEl and DESY. IMPRS UFAST is a joint venture of the Max Planck Institute for the Structure and Dynamics of Matter (MPSD), Deutsches Elektronen Synchrotron (DESY), University of Hamburg (UHH) and European XFEL GmbH. IMPRS UFAST offers a structured PhD program focusing on ultra-fast phenomena, X-ray physics and dynamical imaging in all areas of science covering physics, chemistry and biology.
Salary level: EGr. 13 TV-L (UHH), Equivalent of 75 % to EGr 13 TVöD Bund (MPSD, XFEL), or TV-AVH (DESY)
Start date: Summer/Autumn 2026. In exceptional cases, it may possible to start on the research project earlier., fixed for a period of three years (This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act [Wissenschaftszeitvertragsgesetz, WissZeitVG]).
Application deadline: 2025-11-26
Scope of work: Full-time position (MPSD), part time of 75 % (UHH, DESY, XFEL)
Weekly hours: Full-time positions (TV-L and TVöD Bund) currently comprise 39 hours per week. Full-time positions (TV-AVH) currently comprise 40 hours per week (39,5 hours for research associates with children under 12 years of age).

The International Max Planck Research School for Ultrafast Imaging and Structural Dynamics in Hamburg, Germany, offers a structured PhD program focusing on ultra-fast phenomena, X-ray physics and dynamical imaging in all areas of science covering physics, chemistry and biology.

We offer:

- A range of PhD positions in these areas: open positions
- State-of-the-art research facilities on an extensive science campus
- Cross-disciplinary research in a vibrant, international scientific environment
- First class supervision and mentorship by a team of internationally renowned experts
- Outstanding training in your scientific subject and transferable skills (in English)

- A 3-year employment contract based on the German federal pay agreement

Your responsibilities

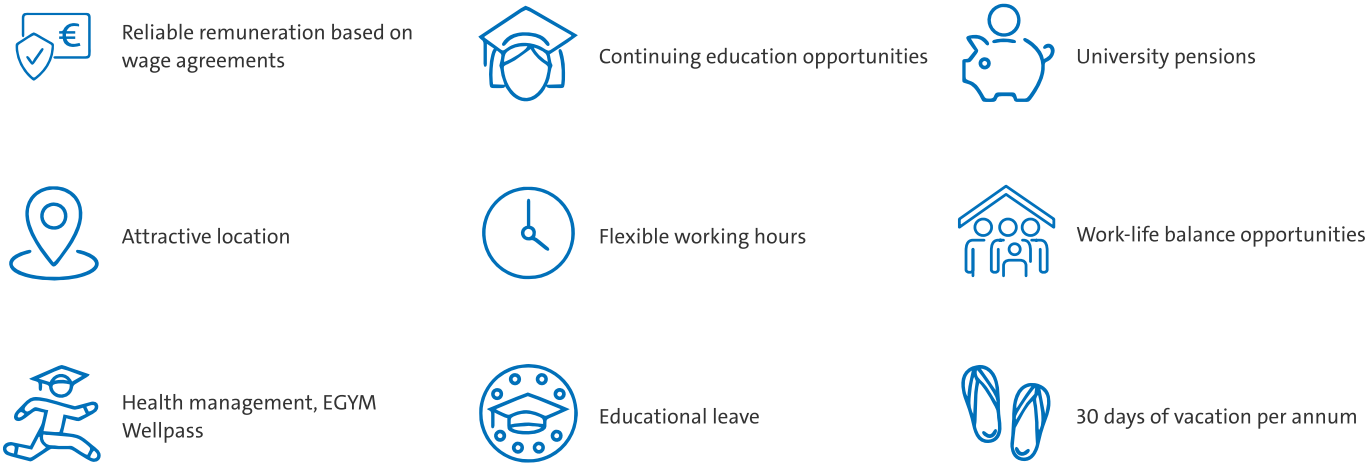
Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications and project results may be used in the context of doctorate.

The program offers exciting research opportunities at ultra-intense electron and X-ray sources to directly observe atomic motions during primary events. The use of ultrafast imaging over the relevant length and time scales generates new levels of understanding of the interplay between structure and dynamics. Specific areas include the theoretical and experimental aspects of quantum materials and atomically resolved dynamics, fundamental light-matter interaction, accelerator-based light sources, coherent controlled molecular and solid-state dynamics, molecular imaging, extreme timescale spectroscopy, ultrafast optics and X-ray science.

Your profile

A university degree in a relevant field. We seek applicants with an excellent academic background. You hold (or are about to complete) an MSc degree or equivalent in physics, chemistry or related areas. You need to be passionate about research in ultrafast phenomena and motivated to conduct rigorous scientific work over the full degree period.

We offer



Universität Hamburg (UHH)

Universität Hamburg—University of Excellence is one of the strongest research educational institutions in Germany. Our work in research, teaching, educational and knowledge exchange activities is fostering the next generation of responsible global citizens ready to tackle the global challenges facing us. Our guiding principle “Innovating and Cooperating for a Sustainable Future in a digital age” drives collaboration with academic and nonacademic partner institutions in the Hamburg Metropolitan Region and around the world. We would like to invite you to be part of our community to work with us in creating sustainable and digital change for a dynamic and pluralist society.

The University of Hamburg is committed to equity. Diversity enriches our university life, whether in our studies, research, teaching, education, or workplace. We therefore welcome all applications, regardless of gender, gender identity, sexual orientation, ethnic or social background, age, religion or belief, disability, or chronic illness.

Deutsches Elektronen-Synchrotron (DESY)

DESY, with its more than 2700 employees at its two locations in Hamburg and Zeuthen, is one of the world's leading research centres. Its research focuses on decoding the structure and function of matter, from the smallest particles of the universe to the building blocks of life. In this way, DESY contributes to solving the major questions and urgent challenges facing science, society and industry. With its ultramodern research infrastructure, its interdisciplinary research platforms and its international networks, DESY offers a highly attractive working environment in the fields of science, technology and administration as well as for the education of highly qualified young scientists.

European XFEL GmbH (EuXFEL)

European XFEL is an international non-profit company located in the Hamburg area in Germany. It operates a 3.4 km-long X-ray laser, which produces X-rays of unique quality for studies in physics, chemistry, the life sciences, materials research and other disciplines. The diverse scientific facilities at European XFEL enable scientists from across the globe to carry out a wide range of experimental techniques.

Time-resolved observations like this can afford completely new insights into the properties of a wide range of matter and its possible uses. A unique variety of very powerful radiation sources is available at DESY for this purpose, from the free-electron lasers FLASH and European XFEL to the synchrotron radiation source PETRA III.

Max Planck Institute for the Structure and Dynamics of Matter (MPSD)

Scientists at the MPSD use ultrashort pulses of light to study the structure and atomic and electronic movements of matter. These dynamic phenomena are examined using ultrashort sampling pulses in the femto- and attosecond range - in other words, lasting billionths of a millionth of a second.

The University of Hamburg strives to increase the number of women in academia, and encourages qualified female academics to apply.

Severely disabled and disabled applicants with the same status will receive preference over equally qualified non-disabled applicants.

Instructions for applying

Contact

For any further questions or problems regarding the application process or the online system, please contact the IMPRS UFAST coordinator on IMPRS.UFAST@mpsd.mpg.de

Location

Luruper Chaussee 149
22761 Hamburg
Zu Google Maps

Reference number

336

Application deadline

2025-11-26

Use only the online application form to submit your application with the following documents:

- cover letter
- CV
- copies of degree certificate(s)

For more details please see: https://www.mpsd.mpg.de/1078264.pdf. Applications must be submitted via the online application portal. Please note that applications by e-mail or surface mail cannot be considered. The four partner institutions UHH, DESY, EuXFEL and MPSD, will conduct a single common selection process to fill all positions.