



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Doctorate



DASHH

DASHH Data Science in Hamburg

Deutsches Elektronen-Synchrotron DESY • Hamburg

Overview

Degree	Dr rer nat, Dr-Ing
Doctoral degree or degree awarded by	Universität Hamburg, Hamburg University of Technology, Helmut Schmidt University
In cooperation with	<ul style="list-style-type: none">• Helmholtz Centre for Infection Research,• Helmholtz Centre hereon GmbH,• Max Planck Institute for the Structure and Dynamics of Matter,• European XFEL,• Universität Hamburg,• Hamburg University of Technology,• Helmut Schmidt University, and• Hamburg University of Applied Sciences
Teaching language	<ul style="list-style-type: none">• English
Languages	All relevant courses are held in English.
Programme duration	6 semesters
Beginning	Only for doctoral programmes: any time
Application deadline	<p>The annual call usually opens in September and closes in December. https://www.dashh.org/application/index_eng.html</p> <p>Interim applications are possible under certain conditions.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>DASHH facilitates an interdisciplinary, structured, three-year PhD programme with a focus on data science and research in the structure of matter.</p> <p>The graduate school covers data challenges from application fields such as structural biology, particle physics, photon science, material science and ultrafast X-ray science. What these data challenges have in common is that they cannot be addressed with standard</p>

computational methods but rather require modern data science and information science techniques. Several areas of computer science and mathematics play important roles: **data management and engineering, machine learning and data analytics, signal and image processing, algorithm design, optimisation and simulation, software engineering and automation and control systems**. An overview of the current PhD research projects is given here: https://www.dashh.org/research/index_eng.html

DASHH is one of the six Helmholtz Information & Data Science Schools that promote young data scientists in all research areas.

Course Details

Course organisation	<p>The DASHH interdisciplinary PhD research projects comprise the fields of particle physics, photon science, structural biology, materials science and research with X-ray radiation sources in collaboration with mathematics and computer science. The PhD students are supervised by a supervisory panel consisting of a panel chair, a professor from the natural sciences and a professor from information/computer/mathematical science.</p> <p>The DASHH graduate curriculum comprises 18 ECTS and is divided into the following branches: knowledge gain, transferable skills and current research. The programme includes regular talks and seminars as well as tailor-made offers organised by DASHH and courses at the partner institutions (provided by, e.g. the PIER Helmholtz Graduate School, the MINGS platform of UHH, the Graduate Academy for Technology and Innovation of TUHH, the Hamburg Research Academy [HRA] and the Helmholtz Information and Data Science Academy [HIDA]).</p>
International elements	<ul style="list-style-type: none"> • International guest lecturers • Language training provided • Study trips • Content-related regional focus
Special promotion / funding of the programme	<ul style="list-style-type: none"> • Helmholtz Graduate Schools
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Depending on the university, enrolment as a PhD student (which includes a public transportation ticket) might be required (fee per semester: 300–500 EUR).
Funding opportunities within the university	Yes

Description of the above-mentioned funding opportunities within the university

Three-year work contract at the TV-L13 level of the German salary scheme

Requirements / Registration

Academic admission requirements

Master's degree (or an estimated date of graduation within the same year of application) in computer science, applied mathematics or natural sciences, preferably with an interdisciplinary training at the interface of natural and computer science or mathematics. Degrees from foreign universities and Master's degrees in non-research oriented study programmes (e.g. "Fachhochschule") might be recognised.

Language requirements

All prospective students must submit proof of adequate English language proficiency: https://www.dashh.org/application/requirements/index_eng.html.

Application deadline

The annual call usually opens in September and closes in December.
https://www.dashh.org/application/index_eng.html

Interim applications are possible under certain conditions.

Submit application to

https://www.dashh.org/application/application_procedure/index_eng.html

Services

Structured research and supervision

Yes

Research training / discussion

Yes

Support for international students and doctoral candidates

- Welcome event
- Buddy programme

Our Partners



— Deutsches Elektronen-Synchrotron DESY —

DASHH Data Science in Hamburg – The Helmholtz Graduate School for the Structure of Matter involves several partners in Hamburg and Northern Germany:

- [Deutsches Elektronen Synchrotron \(DESY\)](#)
- [Universität Hamburg](#)

- Technische Universität Hamburg
- Helmut-Schmidt-Universität
- Helmholtz-Zentrum hereon GmbH
- Helmholtz-Zentrum für Infektionsforschung
- Max Planck Institute for the Structure and Dynamics of Matter
- European XFEL GmbH
- Hochschule für Angewandte Wissenschaften Hamburg

At DASHH, we harness data, computer science and applied mathematical science to advance our understanding of nature. We aim to educate the future generation of data and information scientists that will tackle tomorrow's scientific challenges that come along with large-scale experiments.

We offer

- leading interdisciplinary research between domain research fields and computer/data science or applied mathematics;
- research at world-leading, large-scale research facilities (PETRA III, FLASH, European XFEL, LHC);
- attractive, interdisciplinary thesis topics;
- excellent working conditions at a vibrant and inspiring research campus;
- close supervision and support by a panel of established professors and scientists (consisting of a panel chair, a professor from the natural sciences and a professor from information/computer/mathematical science);
- transferable skills and career development;
- a three-year work contract at the TV-L13 level of the German salary scheme; and
- a friendly and international work environment.



Contact

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🌐 Course website: https://www.dashh.org/events/index_eng.html

● <https://twitter.com/DASHHPhD>

in <https://www.linkedin.com/in/dashh-interdisciplinary-graduate-school-209519180/>

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International Programmes in Germany - Database

www.daad.de/international-programmes
www.daad.de/sommerkurse

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GATE-Germany

Consortium for International Higher Education Marketing
www.gate-germany.de

Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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