

# Introduction to DASHH

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## Data Science in Hamburg - Helmholtz School for the Structure of Matter

- New generation of devices produces more and more complex data
- Big data analysis is challenging
- We need intelligent ***interdisciplinary*** algorithms:
  - Collaboration domain scientists and computer scientists/mathematicians

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- New generation of devices produces more and more complex data
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- Truly interdisciplinary PhD projects with tandem supervision, always combine:
  - research question ***from applied sciences***
  - research question ***from mathematics/computer science***

To promote pioneering research through innovative projects and initiatives

- Schools are collaboration projects led by Helmholtz Center partnering with universities and other research institutes.
- 6 schools in Germany, founded in 2019
- PhD projects are funded in a 50/50 matching scheme



# Enabling Interdisciplinary Research & Collaborations

## DASHH Partners: Research Institutes and Universities

**HZI** HELMHOLTZ  
Zentrum für Infektionsforschung



hereon  
Helmholtz-Zentrum

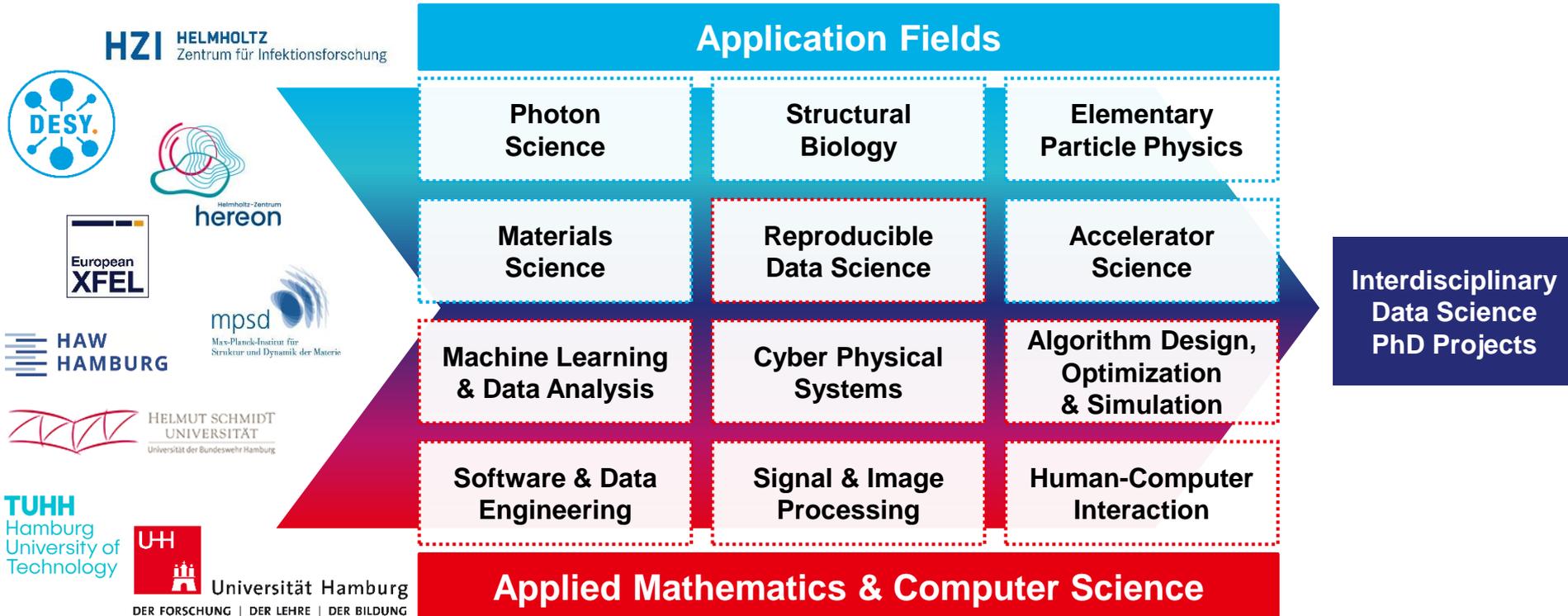


Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG

# Enabling Interdisciplinary Research & Collaborations

## DASHH Research Topics

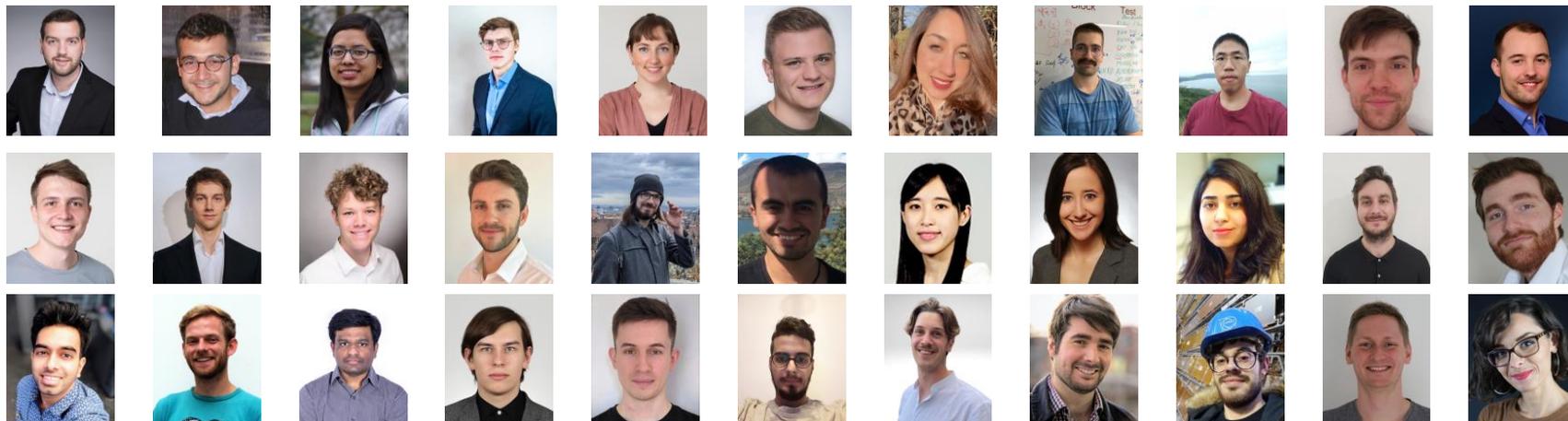
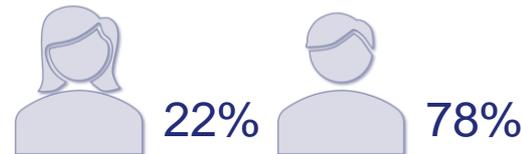


# DASHH Members



## An Interdisciplinary and International Data Science Community

- 82 DASHH Principal Investigators (PIs), 43 DASHH Scientists
- 29 Doctoral Researchers, 11 Alumni
- Nearly half DRs international



# Curriculum

## Ensuring Comprehensive Offers

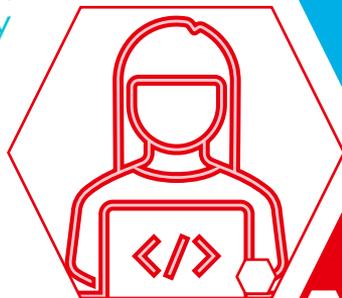
**HiDA** HELMHOLTZ  
Information & Data Science Academy

**TUHH**  
Hamburg  
University of  
Technology

**MIE**  
Machine Learning in Engineering

  
HELMUT SCHMIDT  
UNIVERSITÄT  
Universität der Bundeswehr Hamburg

**UH**  
  
Universität Hamburg  
DER FORSCHUNG | DER LEHRE | DER BILDUNG



Current  
Research  
(6 CP)

Knowledge  
Gain  
(6 CP)



Transferable  
Skills  
(3 CP)

**IMPRS**  
UFAST

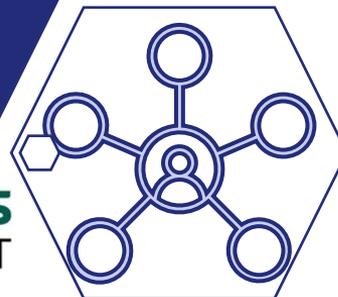
**CLUSTER OF EXCELLENCE**  
CUI: ADVANCED  
IMAGING OF MATTER

**InterAct**  
Leibniz ScienceCampus

**CLUSTER OF EXCELLENCE**  
QUANTUM UNIVERSE

  
**HAMBURG  
RESEARCH  
ACADEMY**

**MINGZ**



  
GRADUIERTEN  
AKADEMIE  
TU HAMBURG

**PIER**  
PIER Education Platform  
A Graduate Education Program at DESY  
in Cooperation with Universität Hamburg

# Participate in DASHH as a doctoral researcher (DR)

Interdisciplinary research on the structure of matter

Looking for a PhD project?

- Apply to currently open DASHH projects (see [www.dashh.org](http://www.dashh.org))

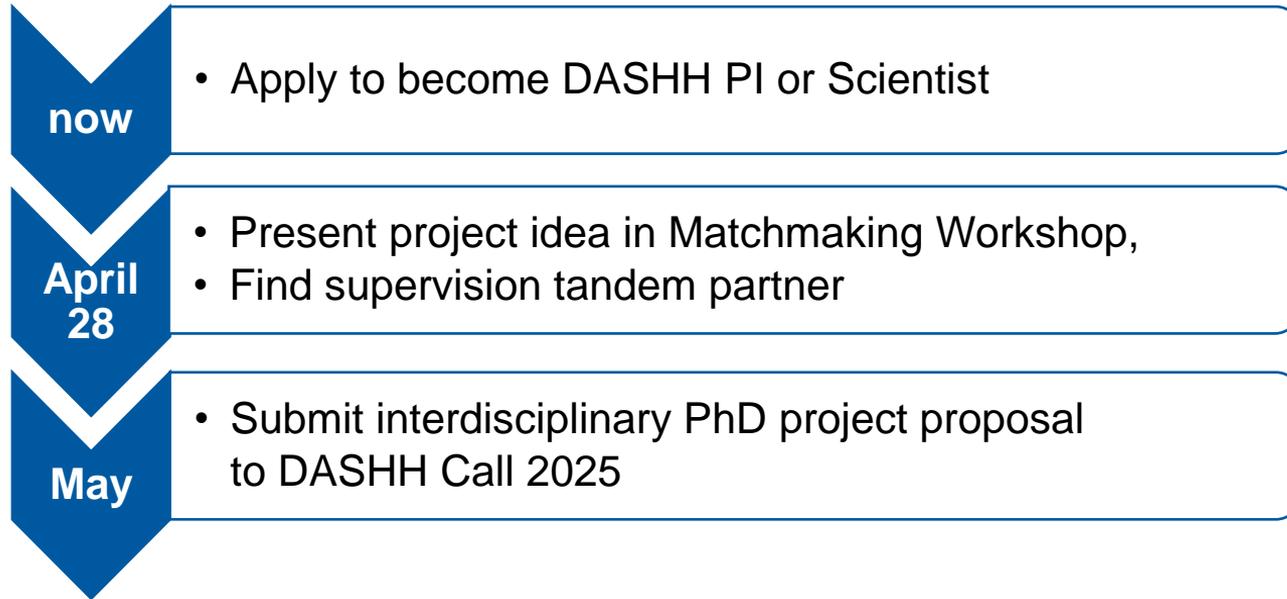
Already on a PhD project with DASHH supervisor?

- Apply to become an associated DASHH DR
- Benefit from curriculum, training, and events

Contact us: [dashh-office@desy.de](mailto:dashh-office@desy.de)

# Project Selection and Application Process 2025

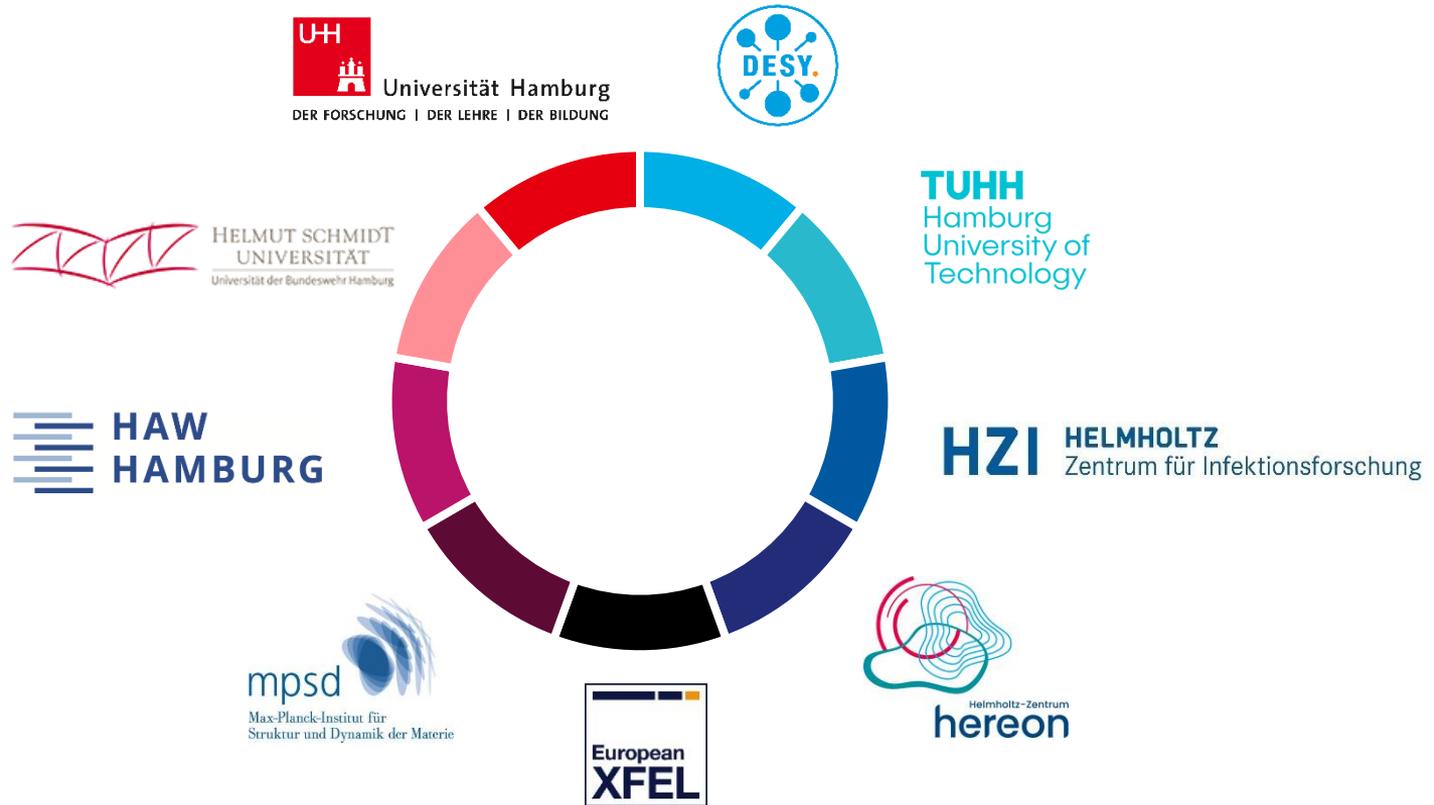
Interested in supervising an interdisciplinary PhD project?



**Selected PhD projects are advertised in September 2025**

Contact us: [dashh-office@desy.de](mailto:dashh-office@desy.de)

# We are DASHH



# Thank you.

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