In science, methods such as computational modeling, data mining and machine learning, combined with today’s computing power, open up entirely new perspectives for gaining information and knowledge. Working with these data science methods is fundamentally changing most scientists’ research: They are a key to cutting-edge research and to designing the future of our civilization, but also require special qualifications.

HIDA – The Helmholtz Information & Data Science Academy – is Germany’s largest postgraduate training network in information and data science. We prepare the next generation of scientists for a data-heavy future of research.
The doctoral researchers will deepen their knowledge in data science methods and learn to combine knowledge from the six Helmholtz research areas – energy, earth and environment, health, aeronautics, space and transport, matter, and information – with data science methods. For these purposes, all doctoral researchers receive dual supervision in data science and their scientific domain.

In addition, HIDA offers doctoral researchers and scientists attractive opportunities to obtain training and continuing education in a wide range of methods and to become part of an international data science network.

We are the central hub for knowledge exchange on data science within the Helmholtz Association, Germany’s largest research organization.

We offer our own data science training courses, access to Germany’s largest computer systems and some of the world’s largest scientific Big Data Sets for doctoral researchers and postdoctoral researchers.

Our HIDA Trainee Network is a novel exchange program for all doctoral and postdoctoral researchers whose research has a strong connection to information or data science: Trainees can apply their data science skills at other research centers, learn new skills and expand their research portfolio across domains.

We foster data science collaborations across disciplines and borders and establish exchange programs for data science talent with universities and research institutions internationally.

We promote transfer of expertise in the field of Information & Data Science, fueling method exchange between different research fields. Our goal is to spark collaborations and build an interdisciplinary community of data scientists.
Some of Our Doctoral Researchers

ANNA THERESA CAVASIN
Next Generation Integrative Modeling for Cryo-Electron Microscopy

AMIR KOTOBI
Dynamic Protein Pattern Recognition in Free-Electron Laser Experiments

YAROSLAV AGAPOV
Visualization for Improved Configuration and Analysis in MRI

MICHAEL BERGMANN
Integrated Data Analysis 2.0

CHRISTIAN GERLOFF
Machine Learning and Bayesian Methods in Neuroscience

PATRICK SCHOLZ
Lifelong Machine Learning in Surgical Data Science

DILIP HIREMATH
Automated Testing of Marine Data Science Applications

DANIMIR DONCEVIC
Optimal Data-Driven Models for Optimization-Based Design of Energy Systems

LAURA MATHIEU
Reactive Control and Adaptive Sampling Using an Autonomous Underwater Vehicle

JORGE GUZMÁN
Structure Identification of Mesoscopic Biological Interaction Networks from Data
NICOLAS MIRANDA
An Unsupervised Census of Astrophysical Transients in the Universe

PIA STAMMER
Uncertainty Quantification in Radiation Therapy

OLGA KONDRATEVA
On-Board Image Classification Based on Space-Based FPGA Processing

ROBIN GREIF
Viability of Neural Network-Based Predictor-Corrector Schemes for Plasma Turbulence Simulations in Tokamak Fusion Reactors

STASIS CHUCHURKA
Multi-Messenger X-Ray Science – Electron Densities from a Combined Analysis of Elastic X-Ray Scattering and X-Ray Emission Data

PAULA BREITLING
Augmenting Physician Workflow to Personalize Care Decisions by Predicting Next Steps and Informational Needs in (Precision) Oncology

GEORGIANA MANIA
A Multi-Purpose Framework for Efficient Parallelized Execution of Charged Particle Tracking

ANGELA SIMSON
Hybrid Data Assimilation for Applications in Cryosphere Physics

BARBARA HÖLLBACHER
Machine Learning to Understand the Gene Regulatory Code

JANNES MÜNCHMEYER
Fast Assessment of Earthquakes

JANETTE TOELLNER
Earthquake Source Determination and Near-Real-Time Prediction ofunami Potential

NICOLAS HABER
Uncertainty Quantification in Radiation Therapy

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Our Research Schools

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SCHOOL FOR HEALTH

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DATA SCIENCE

HDSLEE
HELMHOLTZ
SCHOOL FOR DATA SCIENCE
IN LIFE | EARTH | ENERGY

MUDS
MUNICH SCHOOL FOR
DATA SCIENCE
HELMHOLTZ | TUM | LMU

'DASHH.
Data Science in Hamburg
HELMHOLTZ Graduate School
for the Structure of Matter

HEIBRIDS
HELMHOLTZ EINSTEIN INTERNATIONAL
BERLIN RESEARCH SCHOOL IN DATA SCIENCE

Sounds exciting?

Please get in touch and join our data science network!

www.helmholtz-hida.de
hida@helmholtz.de
twitter.com/HIDAdigital

FOLLOW US ON TWITTER.

Helmholtz Information &
Data Science Academy (HIDA)
Friedrichstraße 171
10117 Berlin