



UNIVERSITY OF
HOHENHEIM

Computational
Science Hub

Curious about what we do?

MEET THE CSH

Computational Science Hub, csh@uni-hohenheim.de

WHAT IS THE CSH?

The CSH provides a **platform** for researchers at the University of Hohenheim to collaborate across faculties.

Its **mission** is to combine system knowledge from different disciplines with methodological expertise in Artificial Intelligence, Data Science, and Scientific Computing.

The CSH actively promotes innovative and transdisciplinary **research** and **teaching** and contributes to the university's strategic focus on **Digital Transformation**.

ACTIVITIES OF THE CSH (I)

- **Connecting** researchers for joint projects.

To support this, we host the CSH seminar (every third Thursday, 4-6 pm during the semester).

We organise CSH workshops and CSH symposia.

- **Coordinating** working groups on specific research topics.

- **Running** the AIDAHO Certificate study program

AIDAHO stands for AI & Data Science Hohenheim

ACTIVITIES OF THE CSH (II)

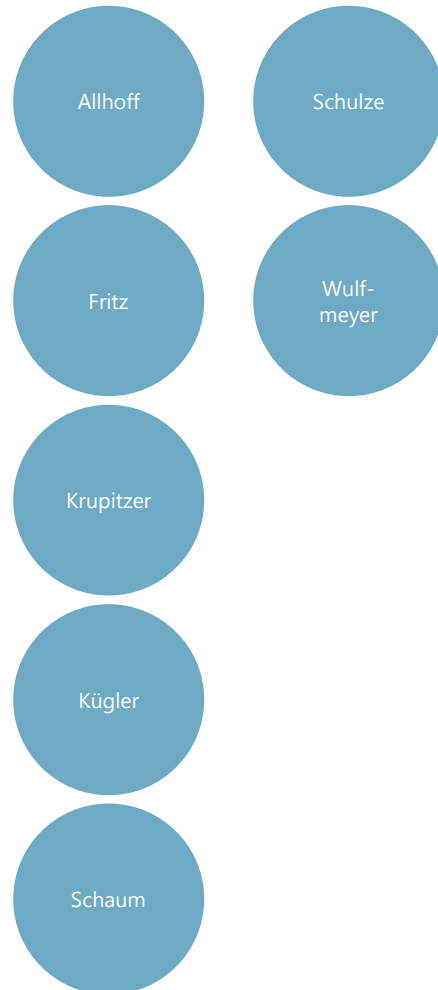
- **Supporting** early-career researchers within the CSH
 - by facilitating exchange and collaboration within the CSH
 - by offering continuing education and training opportunities
(CSH Spring / Autumn Schools)

CSH: PARTICIPATING CHAIRS

Fakultät A



Fakultät N



Faculty W



CFH



CSH BOARD OF DIRECTORS & CSH MANAGER



CSH YOUNG RESEACHERS (MITTELBAU)

What do we do?

- Forum for all Postdocs and PhD students of the CSH
- Regular meetings including presentations, talks, discussions, and get-togethers

How to get informations?

- Mailing list (csh_mittelbau)
- Teams channel (contact representatives or CSH Managing Director for access)

Contact



Dr. Matthias Müller
(Postdoc representative)



Elia Henrichs
(PhD student representative)

AI WORKING GROUP

The CSH established a new "Task Force Generative AI" in summer 2023 to facilitate collaboration on generative AI topics. The Task Force was responsible for developing the chatbot system ("BusyBee") to support prospective students in "Economics" and "Business Informatics" during the 2024 application period. The task force is now a CSH working group.

Contact:

Prof. Dr. Robert Jung

HPC WORKING GROUP

In the working group on high performance computing, researchers from the natural sciences, agricultural sciences, social sciences, and economics collaborate on the use of advanced computational methods in their respective disciplines. The aim of the working group is to explore shared computational challenges and develop cross-faculty strategies for solving complex, data-intensive research problems and to coordinate shared infrastructure use.

Contact:

Prof. Dr. Thomas Dimpfl
Office for Research Services (KIM)

HYBRID INTELLIGENCE WORKING GROUP

Hybrid intelligence combines the complementary strengths of collective human and artificial intelligence, thus permitting a quality of results that neither the one nor the other approach can achieve alone. The working group integrates tools like artificial intelligence, multi-agent modeling, automated environmental monitoring and novel approaches in the field of decision intelligence and governance. The aim is to make agriculture more sustainable by reconciling productivity and biodiversity at the landscape scale.

Contact:

Prof. Dr. Thomas Berger

NETWORK ANALYSIS WORKING GROUP

In the working group on network analysis, natural scientists & social scientists exchange ideas regarding the application of this method within their respective research fields. The aim of the working group is to identify research questions & methodological challenges that are shared across faculties.

Contact:

Prof. Dr. Jens Vogelgesang

CSH STORAGE SYSTEM

The CSH has its own storage system with **700 TB of storage**. Members of the CSH have the possibility to request access to this storage system.



CSH & EXCELLENCE CLUSTER (DFG)



Fakultät A



CSH Member Karl Schmid

Crop Biodiversity and Breeding
Informatics

Fakultät N



CSH Member Waltraud Schulze

Institute of Plant Breeding, Seed
Science and Population Genetics

GreenRobust: Understanding Robustness of Plant Systems from Molecules to Ecosystems

The cluster is dedicated to the question of how plants can remain functional despite environmental stress and how agricultural productivity can be maintained in the face of climate change and the increasing threat of pests.

CSH & EXCELLENCE CLUSTER (DFG)



Fakultät W



CSH Member Franziska Schünemann

Bioeconomy

IntCDC: Integrative computational design and construction for architecture

The aim is to enable ground-breaking innovations in the construction sector that can be only achieved through highly integrative basic research in an interdisciplinary, large-scale research project.

CSH & EXCELLENCE CLUSTER (DFG)



Fakultät A



CSH Member Thilo Streck

Biogeophysics

TERRA: Terrestrial Geo-Biosphere Interactions in a Changing World

TERRA will investigate terrestrial geo-biosphere interactions as drivers of Earth-System dynamics in the geological past, present, and near future using reconstructions, observations, experiments and modeling. The cluster will unravel whether and on which temporal and spatial scales geodiversity fosters biostability and biodiversity fosters geostability.

CSH & DFG RESEARCH UNIT 5639



Fakultät N



CSH Member Volker Wulfmeyer

Physics and Meteorology

Fakultät A



CSH Member Thilo Streck

Biogeophysics

Land Atmosphere Feedback Initiative (LAFI)

The Land-Atmosphere Feedback Initiative is an interdisciplinary consortium of researchers from atmospheric, environmental, agricultural, and soil sciences as well as from hydrology, geography and neuroinformatics.

CSH & ARTIFICIAL INTELLIGENCE AND DATA SCIENCE CERTIFICATE HOHENHEIM (AIDAHO)



Fakultät W



CSH Member R. Jung
Physics and Meteorology

Fakultät W



CSH Member J. Vogelgesang
Biogeophysics

Fakultät N



CSH Member C. Krupitzer
Biogeophysics

Fakultät A



CSH Member A. Stein
Biogeophysics

AIDAHO

The aim of AIDAHO is to increase the expertise of its participants in the fields of Artificial Intelligence (AI), Data Science & Scientific Computing.



Bundesministerium
für Forschung, Technologie
und Raumfahrt

CSH & AI FOR BUSINESS | BUSINESS FOR AI (ABBA)



Fakultät W



CSH Member Mareike Schoop
Intelligent Information Systems

Fakultät W



CSH Member Henner Gimpel
Digital Management

ABBA

The objectives of the joint project are the development and provision of a modular teaching toolkit for artificial intelligence, designed to impart scientifically grounded and practice-oriented interdisciplinary AI competencies to students of business studies.



Bundesministerium
für Forschung, Technologie
und Raumfahrt

PROGRAM OF TODAY

14:00–14:15	Arrival and Welcome
14:15–14:30	Introduction of the CSH and the CSH Young Researchers by Prof. Robert Jung and Elia Henrichs hybrid
14:30–15:00	Short Presentations by the CSH Working Groups The CSH working groups introduce their work hybrid
15:00–16:00	Meet and Greet Informal get-together with the CSH members
16:00–16:15	Introduction of the CSH and the CSH Young Researchers by Prof. Robert Jung and Elia Henrichs hybrid
16:15–17:00	Keynote by Prof. Dr. Karl Schmid Topic: A brief overview of the new Excellence Cluster GreenRobust hybrid
17:00–18:00	Meet and Greet Informal get-together with the CSH members
Afterwards	Joint evening in the denkbar