

Funding for Interdisciplinary Research Projects with Data Science:

CROSS-DISCIPLINARY LABS AT HCDS

Guidelines for proposal submission

I. Research funding for interdisciplinary data science projects

The House of Computing and Data Science (HCDS) is a new central unit of Universität Hamburg (UHH). It enables and shapes the digital transformation of science.

In order to strengthen cross-disciplinary collaboration between disciplines and digital methodologies, HCDS awards grants to work on data-driven topics.

We are looking for collaborative projects with scientists who would like to expand their research projects with data analysis and automation, and work on the resulting research questions of digital methods in close cooperation with computer science-related researchers. Such collaborations may include, for example, scholars from the humanities and computer scientists, or bioinformaticians and social scientists, or business data scientists and lawyers, or any other interdisciplinary collaborations with a data focus and a data-based research question in another discipline.

Beyond this basic prerequisite, the research questions can be freely chosen; the essential point is that scientifically relevant topics in all participating fields, including digital methodologies, are advanced on an equal footing. Thus, the applied or basic digital methods should have requirements beyond the current state of available software solutions.

II. Structure and strategic direction of Cross-Disciplinary Labs

Cross-Disciplinary Labs (CDLs) consist of two (or more) different research disciplines using and advancing data-based methods from Artificial Intelligence, Data Science and Machine Learning. The objective is to use modern digital methods to advance diverse scientific disciplines, and methodological sciences to answer new questions around knowledge transfer and interdisciplinary application.

Preferably, the CDLs will result in larger third-party funded projects, such as DFG collaborative projects (ExCI, SFB, GRK, research groups), ERC grants, and EU collaborative projects (incl. junior researcher development). A connection to the research priorities, potential areas and profile initiatives of the UHH is desired.

The House of Computing and Data Science supports both the funding program and the subsequent CDLs in the form of joint events and the website. In this context, we also support the search for methodological expertise and we give advise on the development of research questions in the sense of this call for proposals.

III. Funding Requirements

Eligible to apply as Principal Investigator (PI) are scientists from UHH (including UKE) with a PhD whose employment is secured for the planned duration of the funding (2-3 years). The employment relationship should also include sufficient time to prepare the subsequent third-party proposal. Typically, CDLs are applied for by at least two PIs, one covering the methodological and one the applied science aspects.

CDLs involving institutions outside UHH can be funded if the external organization co-finances the costs incurred on your side.

The following conditions must also be observed when submitting an application:

- Only one application can be submitted per PI; participation is possible in multiple applications.
- A maximum of 2 applications per faculty will be funded; here the faculty of the PI of the applying science counts.
- An individual contribution of 33% of the total funding amount must be covered; this should be confirmed by the dean's offices of the participating faculties. The individual contribution can be provided by faculty or own funds, as well as by in-kind contributions, e.g. by involving faculty service facilities.

IV. Funding Volume and Usage

A total funding amount of max. 160,000 euros per year per application is possible. Projects should have a duration of 2-3 years and typically include staff funding, which are appropriately divided between the applying research branch and digital methodological sciences.

Applications may include doctoral projects. In addition to staff funds, material expenses as well as travel expenses for members of the CDL and for guests are also eligible for funding.

V. Auswahlkriterien

Selection criteria are interdisciplinarity, quality, and coherence of the proposal; the plausibility and relevance of the proposed measures as preparatory work for collaborative proposals or their components; the qualification and scientific excellence of the applicants (in relation to their respective career stage); the contribution to the further development of the research profile or a research field of UHH; and the appropriateness of the requested funds. Special consideration will be given to contributions to ethical and sustainable digitalization; here, projects as a whole can serve the common good (social justice, digital participation, environmental protection, health, etc.), or integrate aspects of sustainability in the digital design (including data security, ethical aspects of algorithms, climate impact of data-intensive processes).

Given the same project suitability and application quality, projects with a more representative selection of staff (e.g. with regard to gender, academic age) will be preferred.

VI. Procedure

After a formal review, the applications are subjected to a comparative assessment by the Steering Committee for Digitalization and Information Technology in Research and the House of Computing and Data Science; additional experts may be consulted. The Executive Board makes its funding decisions on the basis of this evaluation, taking into account the abovementioned criteria.

Approvals are expected to be made in January 2023, with funding available from March 1, 2023 for the duration of the requested project.

During the funding period, CDLs report approximately semi-annually at HCDS scientific meetings. CDLs commit to documenting the methodological advances and application scenarios achieved in a form that allows for subsequent use on the part of the HCDS Center of Methodological Excellence. To a small extent (approx. 5% of the working

time), the staff of the CDLs shall also be available for processing inquiries from the Method Competence Center.

After the grant period, a brief report on the use of the funds and resulting application projects must be submitted.

Further questions can be directed to the House of Computing and Data Science:
cdl-call.hcds@uni-hamburg.de

VII. Proposal Outline and Submission

The application consists of the following parts:

- I. Project description (max. 8 pages excl. references, 11pt Arial)
 1. Abstract
 2. Research Questions
 - a. Interdisciplinary research questions
 - b. Methodological research questions (computer science related research, methods around data & automation).
 - c. Applied research questions (any branch of research, enabled by automation).
 3. Goals and work packages (incl. approximate timeline)
 4. Resource planning and finances
 5. Potential for future work
 - a. Contribution to research priorities, potential areas and profile initiatives of UHH, <https://www.uni-hamburg.de/en/forschung/forschungsprofil/forschungsschwerpunkte.html>
 - b. Contribution to digital cross-cutting themes of the excellence strategy (research data management, machine learning, artificial intelligence, digital transformation)
 - c. Aspects of ethics and sustainability
 - d. Interdisciplinarity of the project and representativeness (diversity) of the participants.
- II. CVs of Principal Investigators (max. 2 pages per PI) and up to 10 publications relevant to the CDL topic.
- III. Statement on co-financing by the dean's offices of the participating faculties or other providers of the own contributionDer Antrag kann auf **Deutsch oder Englisch** verfasst werden.

Application documents must be sent in PDF format to Department 4 no later than 10/31/2022: forschungsfoerderung.uhh@uni-hamburg.de (Dr. Ines von Borries & Dr. Oliver Callies).

Content-related questions can be directed to HCDS: cdl-call.hcde@uni-hamburg.de.