The Ruhr area, one of Europe's largest metropolitan regions, offers attractive career opportunities for excellent scientists and scholars from around the world. In 2021, Ruhr University Bochum, TU Dortmund University and the University of Duisburg-Essen established the Research Alliance Ruhr to bundle their cutting-edge international research on the most urgent challenges facing humankind. There are four research centers and a college. This is just the latest chapter in our long-standing collaboration as the University Alliance Ruhr (UA Ruhr), a community of 14,000 researchers and 120,000 students in the heart of Germany.

The Chair for Human-AI Interaction at the TU Dortmund offers a position within the Research Center Trustworthy Data Science and Security as PhD Researcher. The position is to be filled as early as possible and is in full-time (part-time possible). Payment according to public service s agreement: TV-L E13.

PhD Position Physiological-AI Interaction

(3 years)

We invite applications from excellent candidates to work with us in the field of Physiological Interaction and Biofeedback. Our research shapes the user's perception and transparency of collaborations between humans and machines. With your research, you will play a primary role in the development of our new Research Center and outreach with trustworthy technology to the general public. In this position, we will explore and design communication and interaction patterns that enable effective and meaningful Physiological-based Human-AI Interaction. We aim to answer questions such as: How can users implicitly interact with AI systems through physiological signals? And how can we foster trust, transparency, and user understanding in such interactions? This research sits at the intersection of Human-Computer Interaction, Artificial Intelligence, and Affective Computing, and will contribute to the development of adaptive, human-centered AI systems.

YOUR RESPONSIBILITIES

- Conducting research within the project, individually and in cooperation with other researchers
- Maintaining and extending the Physiological Research Lab environment and software stack
- Supervision of student research assistants working in the Physiological Research Lab
- Supervision of Bachelor's and Master's theses
- Participation in teaching activities

YOUR QUALIFICATIONS

- Excellent degree (Master of Science) in computer science, human-computer interaction, cognitive science, neuroscience, or similar programs
- Strong proficiency in physiological sensing (e.g., EEG, fNIRS, EDA, ECG)
- Strong proficiency in programming
- Proficiency in the development and validation of AI systems
- Hardware prototyping skills, hands-on attitude
- Experience with experimental design, both quantitative and qualitative
- High proficiency in English, both written and spoken, for your scientific publications and presentations

WHAT WE OFFER

- Work in an outstanding, internationally visible research environment
- Active supervision and promotion of your scientific development toward a doctoral degree
- We aim at both theoretical research as well as practical applications in close collaboration with academic and industrial partners
- Access to state-of-the-art research facilities and resources, including our Robotics Research Lab
- A collaborative and supportive research environment with an international, friendly, and dedicated team
- A balanced and family- friendly work-life relationship is important to us; thus, we offer options for flexible working times or part-time remote home-office.

RESEARCH ALLIANCE RUHR

The Research Alliance Ruhr is a joint undertaking of the three major universities in the Ruhr area and was initiated by the Ruhr Conference. The four research centers focus on "One Health Ruhr," "Chemical Sciences and Sustainability," "Trustworthy Data Science and Security," and "Future Energy Materials and Systems." In addition, the Research Alliance Ruhr has established a "College for Social Sciences and Humanities".

The Research Alliance Ruhr will appoint up to 50 research professors in the next few years and also offer numerous positions for research assistants. Join us now to create innovations for the world of tomorrow in Europe's densest university landscape, where you can find a wide range of scientific and industrial partners right on the doorstep.

YOUR APPLICATION

If you are interested in the position, please send your application (Ref-No. w56-25) until 29.07.2025 to:

Research Center Trustworthy Data Science and Security Technische Universität Dortmund Prof. Dr. Sven Mayer Joseph-von-Fraunhofer-Str. 25 44227 Dortmund

sarah.keuter@tu-dortmund.de

Please provide the usual documents: motivation letter, CV, a summary of the Master´s thesis, copies of your certificates and 2 candidates who can provide a reference letter for you.

DIVERSITY

The TU Dortmund University promotes diversity and equal opportunities. Convince us with your personality and expertise.

Applications from women will be given preferential treatment in accordance with the legal regulations. It is pointed out that the application of suitable severely disabled persons is desired.

FURTHER INFORMATION

Further information about the Research Center can be found at: https://rc-trust.ai

If you have any further questions, please contact: Prof. Dr. Sven Mayer sarah.keuter@tu-dortmund.de

technische universität dortmund

RUHR UNIVERSITÄT BOCHUM

RUB

UNIVERSITÄT DUISBURG ESSEN

Open-Minded