

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.

As part of the Research Alliance Ruhr, the **Research Center Trustworthy Data Science and Security** is bringing the expertise of its universities together to bridge the gaps between Psychology & Social Sciences, Artificial Intelligence & Machine Learning, Data Science & Statistical Learning, and Cybersecurity & Privacy. The following nine interdisciplinary PhD positions are to be filled as early as possible and are in full-time (part-time possible). Payment according to public service's agreement: TV-L E13.

9 PhD Positions in Trustworthy Data Science and Security (3 years) (m/f/d)

YOUR RESPONSIBILITIES

- Reliability Guarantees for Artificial Intelligence
- Adversarial and Verification of Deep Anomaly Detectors
- Balancing Privacy Enhancing Technologies and Data Governance
- Neuro-Symbolic Verification
- Probabilistic Verification of Learning Systems
- Safe Reinforcement Learning via Runtime Monitoring
- Safety and security Analysis of large generative models
- Privacy and Transparency for AI systems
- Legal and policy frameworks for technology governance
- Data flow monitoring for auditing interconnected systems
- Privacy, security and safety in eXtended Reality (AR/VR/Metaverse)
- Uncertainty Quantification in Statistical and Machine Learning
- Robustness and Properties of Statistical and Machine Learning Approaches
- Statistical Learning for Spatio-Temporal Challenges
- Probabilistic Learning Approaches in Human-Centered Systems
- Automated Tuning of Parameters for complex machine learning models

YOUR QUALIFICATIONS

- Excellent degree (Master of Science) in psychology, statistics, computer science, mathematics, or similar programs
- High degree of creativity, commitment, analytical competence, and interdisciplinary teamwork.
- High proficiency in English, both written and spoken for your scientific publications and presentations.

WHAT WE OFFER

We work in a multidisciplinary team on collaborative research projects jointly envisioned by leading international experts from different domains. We aim at both theoretical research as well as practical applications in close collaboration with academic and industrial partners. The position is embedded in a creative, attractive, and internationally renowned research environment. 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. Our international network of researchers and industry partners ensures a seamless transition into your next career step as university professor or international research institutions. 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.

MORE INFORMATION

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

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 positions, please send your application (Ref-No. w14-23) until 31st May 2023 to:

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

Please provide the usual documents: motivation letter, CV, and copies of your certificates.

CAREER OPPORTUNITIES

Our Research Center will hire 12 research professors in the next few years and offer numerous positions for research assistants and research group leaders. Join us now to create trustworthy innovations for the digital world of tomorrow in Europe's largest metropolitan region.

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

If you have any further questions, please contact:

Prof. Dr. Emmanuel Müller
open-positions@rc-trust.ai