UA RUHR

University Alliance Ruhr (UA Ruhr)

Three Universities, One Community, Endless Opportunities

October 2026

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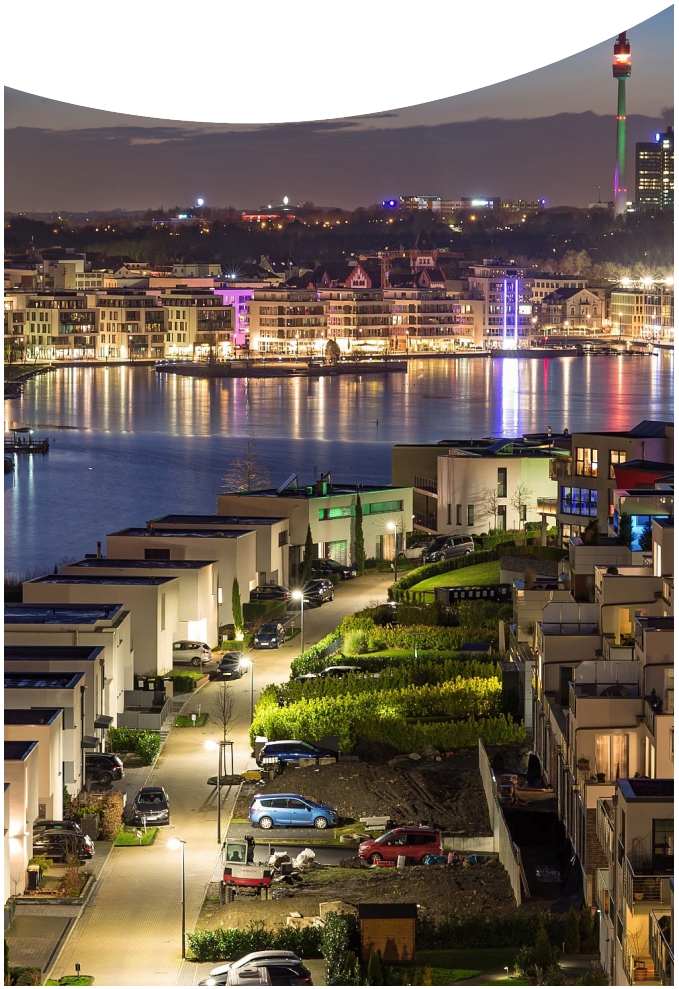

The Metropolis Ruhr in Europe

- Polycentric Metropolis **in the heart of Europe**
- **5,1 million residents, the 3rd largest metropolitan area in Western Europe**
- **10 of the 100 largest German companies** are located here
- **GDP** of approximately **170 billion euros**, larger than that of Hungary
- One of the **largest academic hubs in Germany:**
  - 23 universities & universities of applied sciences
  - 4 Max Planck Institutes
  - 5 Fraunhofer Institutes
  - 4 Leibniz Institutes
- More than **240,000 students**

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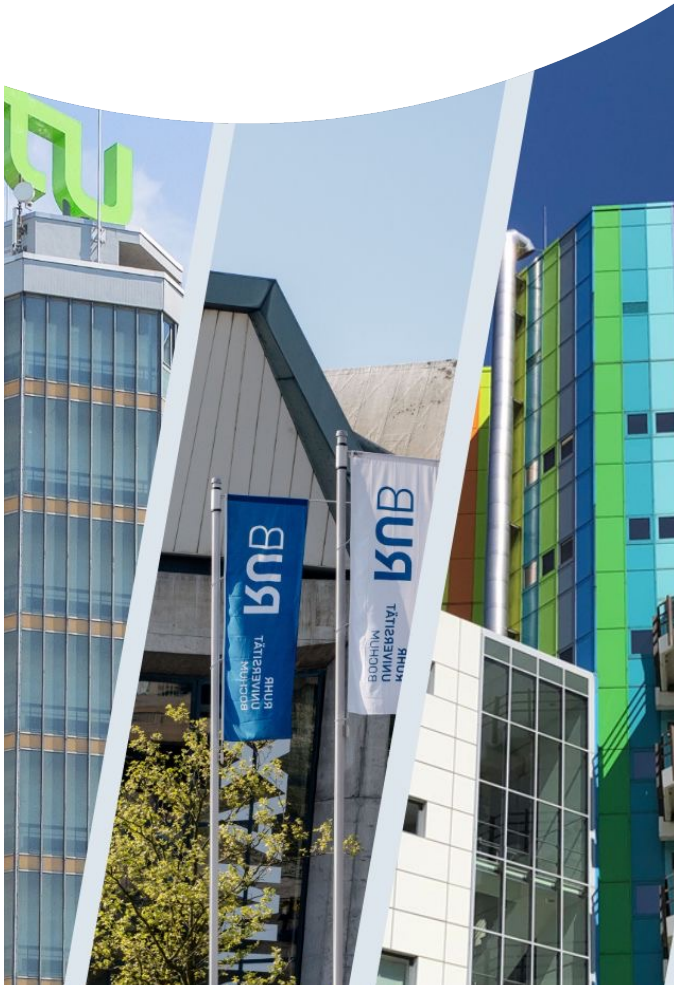

The University Alliance Ruhr:
Three strong universities joining forces

The Ruhr University Bochum, TU Dortmund University, and the University of Duisburg-Essen founded the **University Alliance Ruhr (UA Ruhr)** in March 2007**:**

- To pool their expertise
- To enhance their collective potential
- To strengthen the visibility of the region

→ Our vision: Developing solutions for the future of society

By bundling the complementary strengths of our partner universities, we successfully open up innovative research fields. With joined forces, we thus form critical mass in terms of personnel and infrastructure.

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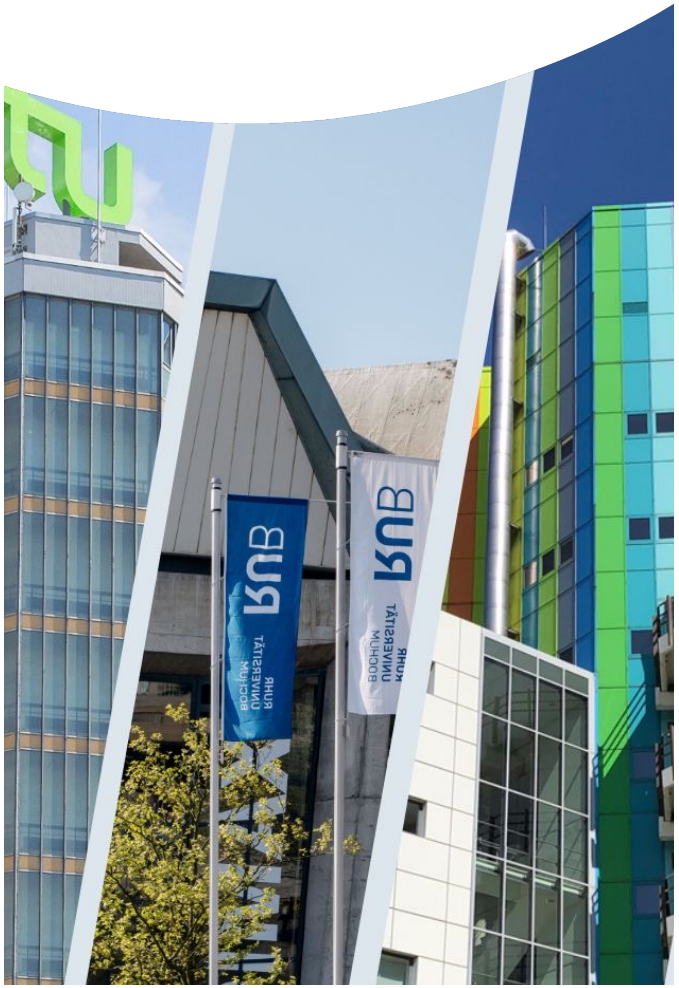

The collective potential of the UA Ruhr – joint figures und projects

- More than **100,000 students**
- More than **16,000 graduates** and more than **1,000 doctorates** granted each year
- 15,000 employees, **9,500 academic staff,** incl. almost 1,300 full professors
- Approx. **€ 440 million third-party funds** every year
- Over **100 joint projects**
  - **joint study programs** and **professorships**
  - **liaison offices** abroad (Eastern Europe/Central Asia, North America, Latin America)
  - a **joint Research Academy** for **early career researchers**
  - a **Transfer Ltd.**

Building on that in 2021 we founded the Research Alliance Ruhr

- Four world-class Research Centers and one College for Social Sciences and Humanities for advancing international cooperation

OUR LOCAL RESEARCH PARTNERS

SCIENCE HOTSPOT RUHR

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UA RUHR | RESEARCH CENTER ONE HEALTH RUHR

RUHR INNOVATION LAB

A consortium of Ruhr University Bochum and TU Dortmund University

Ruhr Innovation Lab
Part of Germanys Exellence Cluster

- **Strategic Partnership:**
  Ruhr University Bochum and TU Dortmund Universitys Ruhr Innovation Lab has been awarded funding as a Consortium of Excellence
- placing it among the top 15 institutions in the German academic landscape
- the top-class competition for research in Germany.
- **Three clusters of excellence**
  - RESOLV: Understanding and Optimizing Solvents
  - CASA: Developing Security for the Digital Society
  - Color Meets Flavor: Exploring New Phenomena in Particle Physics
- Research activities in **three interrelated areas:**
  - Understanding basic molecular and systemic control mechanisms
  - Investigation of disturbances within systems
  - Further development of the international "One Health" concept

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Meet one of our Alumni:

Dr. Sasan Rabieh

Dr. Rabieh received his Ph.D. in Environmental Analytical Chemistry from University of Duisburg-Essen, Germany. His research area is elemental speciation.

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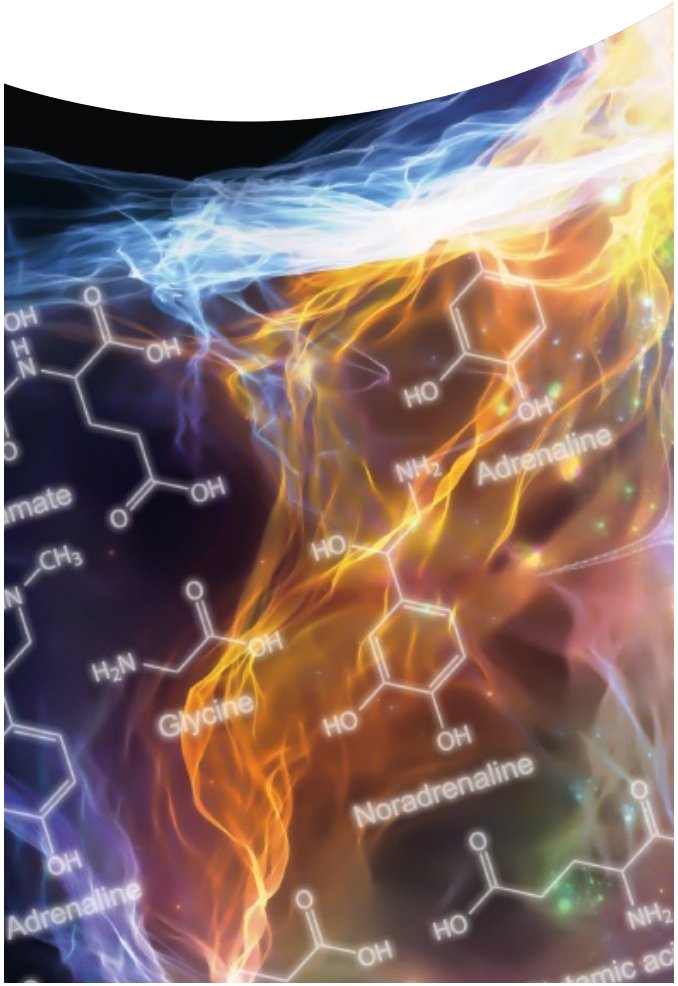
Questions?

UA RUHR | RESEARCH CENTER ONE HEALTH RUHR

Research Center
One Health Ruhr – from Molecules to Systems

- **Objective:**
  Taking a holistic approach on the topic of health and its significance for humans and the environment as well as the interconnectedness of all three.
- **Research Foci:**
  - Aquatic Ecology
  - Molecular Oncology
  - Cognitive Neuroscience
- Research activities in **three interrelated areas:**
  - Understanding basic molecular and systemic control mechanisms
  - Investigation of disturbances within systems
  - Further development of the international "One Health" concept

UA RUHR | RESEARCH CENTER CHEMICAL SCIENCES AND SUSTAINABILITY



Research Center
Chemical Sciences and Sustainability

- **Objective:**
  Pacing pioneering research into the understanding of chemical reactions, processes and products at the molecular level.
- **Research Foci:**
  - Monitoring of Molecular Reactions and Collisions
  - Ultra-Low Temperature Chemistry and Quantum Effects, Ultrafast Electron Diffraction, Solvation
  - Product and Process Development
  - Process Technology in the Chemical Industry, Robotics, Machine Learning in Chemistry, Green Chemistry, Catalysis
  - Chemistry in Civil Engineering and Biomolecular Systems
  - Sustainable Concrete, Biotechnology, Biomolecular Condensates and Enzyme Catalysis

UA RUHR | RESEARCH CENTER TRUSTWORTHY DATA SCIENCE AND SECURITY

Research Center
Trustworthy Data Science and Security

- **Objective:**
  Empowering people to understand and use trusted technology.
- **Research Foci:**
  - Statistical Data Analysis and Machine Learning
  - Artificial Intelligence
  - Cybersecurity and Privacy
  - Psychology and Human-Centeredness of Technology
- **Research Approach:** human-centered covering all interdisciplinary research on
  - Trustworthy Data Analytics
  - Explainable Machine Learning
  - Privacy-friendly Algorithms

UA RUHR | RESEARCH CENTER FUTURE ENERGY MATERIALS AND SYSTEMS

Research Center
Future Energy Materials and Systems

- **Objective**:
  Finding sustainable materials for the energy applications of the future.
- **Research Foci:**
  - Fundamental understanding of materials properties and processes
  - Design of new high-performance materials starting from the atomic scale
  - Integration of the new materials into the development of future energy systems
- Interdisciplinary research approach to develop **new materials for:**
  - Energy Carrier Generation
  - Energy Conversion
  - Energy Storage and Transport

UA RUHR | COLLEGE FOR SOCIAL SCIENCES AND HUMANITIES

College for Social Sciences and Humanities

- **Objective**:
  Promoting excellent research in the humanities and social sciences within the University Alliance Ruhr and advancing international cooperation.
- **Open-topic approach** with three main cornerstones
  - High-profile research professorships
  - Interdisciplinary research groups
  - Senior Fellowship Programme
- Strengthening and reviving systemic interfaces and productive overlaps between the institutions, disciplines and research fields of the UA Ruhr.

RESEARCH ACADEMY RUHR

Support for Scientists on Their Career Path: Research Academy Ruhr

- Combined **career development** services under the umbrella of the Research Academy since 2017 for 10,000 Early Career Researchers
- **Interdisciplinary qualification** and networking program for the different stages of academic careers (doctoral research, Postdoc phase, Junior Faculty)
  - Workshops, mentoring, career and networking events
- Promoting the visibility of UA Ruhr's excellent research conditions on an international level by hosting international postdocs
    - **Research Explorer Ruhr:** 2-week program for international early postdoctoral researchers (to-be) interested in exploring the research landscape of the University Alliance Ruhr, follow-up possible

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International Networks

- **Liaison Offices** in **North America**, **Eastern Europe/Central Asia** and **Latin America** to promote international exchange and academic mobility for different stages of academic career:
  - **Study Bridge**: enables young people from non-EU countries to embark on a degree program at the UA Ruhr after having finished school
  - **Fellowship programs** from and to the US for students
  - **Future's Fellows** for ECR at UA Ruhr
  - **KWI International Fellowship Program** and International Senior Fellowship Program for excellent scientists from the humanities and social sciences
- **International Advisory Board** supports UA Ruhr in the long-term strategic planning, particularly with regard to further internationalization

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To learn more: www.uaruhr.de/en