





U Bremen Research Alliance

Boosting Research

Just imagine working on research projects that allow you maximum freedom to make the world a better place. Interdisciplinary and international. Based on partnership and cooperation. Supported by a strong network of top-level institutions. The U Bremen Research Alliance could make your dreams come true. We would be happy to welcome you here in Bremen.

„A strong alliance“

„A strong university promotes strong non-university research. In turn, strong non-university research institutes enrich university development. This is the principle that underlies the U Bremen Research Alliance. In which more than 40 cooperation professorships forge links between university and non-university research. The close cooperation among the partners in the Alliance creates a collaborative environment with excellent working conditions. Shared use of infrastructures, excellent service and advisory facilities, customized career development, and swift implementation of creative research ideas are the core elements of our Alliance.“



Prof. Dr.-Ing. Bernd Scholz-Reiter
Chairman of the U Bremen Research Alliance and President of the University of Bremen

Partners

Better networked – joining one, joining all

The U Bremen Research Alliance is at home in Bremen and Bremerhaven. In relative terms, no other part of Germany boasts a greater density of research institutions than here. The Alliance adds momentum to this bundling of competences. Its members comprise the research University of Bremen and eleven non-university research institutes, highly renowned in their field. The distinguishing features of our Alliance include excellent infrastructure and creative competence in providing solutions. We bundle our strengths, working in flat hierarchies with short communication channels and nurturing an interdisciplinary culture that offers maximum freedom of scope.

The Alliance members

- Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI)
- German Research Center for Artificial Intelligence (DFKI)
- German Aerospace Center – Institute of Space Systems (DLR)
- German Maritime Museum – Leibniz-Institute for German Marine History (DSM)
- Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM
- Fraunhofer Institute for Wind Energy Systems and Energy System Technology IWES
- Fraunhofer Institute for Medical Image Computing MEVIS
- Leibniz Institute for Prevention Research and Epidemiology – BIPS
- Leibniz Institute for Material-Oriented Technologies – IWT
- Leibniz Centre for Tropical Marine Research (ZMT)
- Max Planck Institute for Marine Microbiology (MPIMM)
- University of Bremen

„Inspiring cooperation“

„A number of different disciplines are involved in researching and safeguarding the future of the oceans. The closer they are interlinked, the greater their impact. The cooperation professorship gives me the chance to shape the interfaces between disciplines and institutions in this direction. The cooperation between the University of Bremen and the non-university institutes in the Alliance is both productive as well as inspiring.“



Prof. Dr. Anna-Katharina Hornidge

Leader of the Social Sciences Section at the Leibniz Centre for Tropical Marine Research (ZMT) and a professor in the Faculty of Social Sciences at the University of Bremen





Location

A friendly place to be – not only when it comes to research

The location of the U Bremen Research Alliance also makes it an attractive partner for researchers. Bremen is not only forerunner in the development of alternative sources of energy, maritime technologies and artificial intelligence. It is also the most important location of Germany's aerospace industry. The way from science to industry is a short one. Several international brands are at home here. Bremerhaven, with the North Sea on its doorstep, is the country's leading center of maritime research and logistics. Bremen with its parks and green surroundings is a cyclists' paradise. What other metropolis boasts such a green environment? The cultural scene is vibrant and varied. And an airport in close proximity to the city center facilitates worldwide mobility.

„Back to Bremen“

Dr. Robert Kun studied at the University of Szeged in Hungary. The young chemist came to Bremen for the first time as a visiting researcher in 2007. Although he has experience of other renowned institutions in Europe and the USA, nothing compares to Bremen: „Fantastic place, great colleagues, excellently equipped labs.“ Ever since, his greatest wish has been to return to Bremen as a postdoc. The University of Bremen's Institutional Strategy and the opportunities within the Alliance meant he could fulfill this ambition. Dr. Kun now leads the cooperative junior research group „Innovative Sensor and Functional Materials“.



Dr. Robert Kun

Leader of the Cooperative Junior Research Group „Innovative Sensor and Functional Materials“, run by the University of Bremen and the Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM

Research

Outstanding – from the deep sea up to outer space

Exploring deep-sea biodiversity and tropical coastal ecosystems, conducting atmosphere research to shed light on climate change, conceiving robots to explore distant planets: the scholars and scientists in the U Bremen Research Alliance are involved in some of the world's most ambitious research projects – from basic research up to and including its application. The twelve members of the Alliance join forces to formulate mutual strategies, establish bridge and cooperation professorships together, and promote young researchers via graduate programs and junior research groups. At the heart of their collaboration are four high-profile areas, in which the members of the Alliance are particularly active.

„Indispensible cooperation“

„Without the close and fruitful cooperation in the Alliance, research at such a high level would simply not be possible. The planning of marine expeditions on the research vessel, the sharing of equipment on board and in the laboratories, and above all the concentrated joint expertise – that's what makes the location so strong.“



Prof. Dr. Nicole Dubilier
Director of the Max Planck
Institute for Marine Microbiology
(MPIIMM) and a professor in the
Faculty of Biology/Chemistry at
the University of Bremen



Marine, Polar and Climate Research

The high-profile area addresses the role of the oceans and coastal waters, the Polar Regions and the atmosphere in the context of global change as well as in the geological past and present. There is also a focus on the development of large research equipment. Examples for this are the remote-controlled underwater robots that act as the eyes and arms of researchers in the deep-sea environment, or even mobile drilling facilities that can fetch up core samples from depths of up to 2,000 meters. In addition, scientists explore the atmosphere with satellite-supported remote sensing – and in the marine ecosystem they research the adaptation strategies of selected microorganisms.



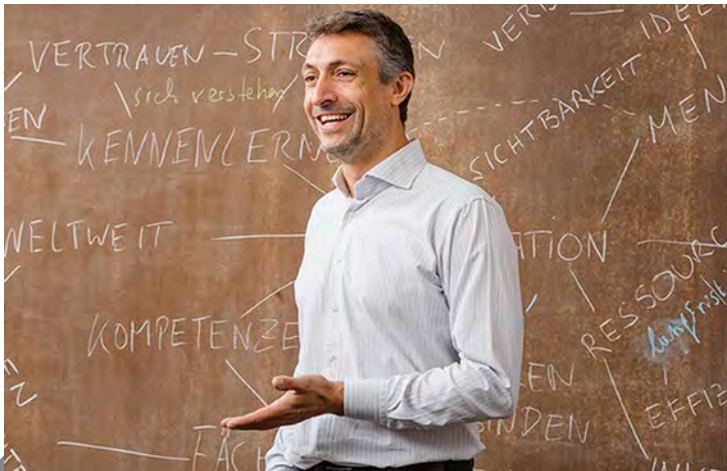
Prof. Dr. Antje Boetius
Director of the Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research (AWI) and a professor in the Faculty of Geosciences at the University of Bremen

„Understanding climate change“

„If you want to understand what influence the oceans and coastal waters, the Polar Regions and climate change has on humans and the Earth system, you will find the ideal research environment to do so in Bremen and Bremerhaven. We have the coast right on our doorstep and there is a whole host of institutions in the area dedicated to the study of the oceans – from the Southern Ocean to the Arctic. Together, we work to shed light on the complex processes in play on our planet, decipher the secrets of biodiversity, and explore options for shaping our future.“

„Cross-disciplinary cooperation – the key to success“

„The scientific exchange in the high-profile area takes place via cooperation in the MAPEX Center for Materials and Processes. Our research aims at gaining a deeper understanding of the relationships between the processes, properties and performance of materials – especially for applications in sustainable mobility and energy sources. MAPEX unites all disciplines of the natural and engineering sciences as well as industrial mathematics and materials informatics. We therefore operate across the borders of several Faculties of the University and our non-university partners.“



**Prof. Dr.-Ing.
Lucio Colombi Ciacchi**
Speaker for the MAPEX Center
for Materials and Processes
and a professor in the Faculty
of Production Engineering at
the University of Bremen

Materials Sciences and Production Engineering

Resource-efficient, tailor-made, durable: These criteria are at the center of our work, which covers the entire process chain from the development phase to the industrial application of materials of all kinds – as well as targeted measures for educating young researchers in new technologies. One focus of our work is on the unpredictable behavior of materials during their synthesis, manufacture and use. The goal is to predict such changes at the atomic level and thus contribute, for example, to producing completely new materials with individually tailored and locally varying properties. Another focus is on the development of resource-efficient materials and processes in order to make the production of the high-tech products we use every day, such as cars, airplanes or smartphones, more sustainable, reliable, and efficient.

13 „Continual exchange of ideas“

„Public Health is a highly applied and multidisciplinary field with the aim of protecting and improving the general health of the population. Our Cooperative Junior Research Group therefore benefits greatly from being part of the Leibniz Institute for Prevention Research and Epidemiology – BIPS and links to the Institute for Public Health and Nursing Research at the University of Bremen. This results in a continual exchange of ideas and the development of joint projects, from which both the University as well as BIPS only stand to gain.“



Prof. Dr. Stefan K. Lhachimi
Leader of the Cooperative Junior Research Group „Evidence-Based-Public Health“, run by the University of Bremen and the Leibniz Institute for Prevention Research and Epidemiology – BIPS

Health Sciences

Prevention, health care and nursing are at the center of the health and epidemiological research done by partners in the U Bremen Research Alliance. For example, the field examines how lifestyles and the environment contribute to the development or prevention of chronic diseases; or which health promotion measures are most effective and efficient. Particular attention is paid to questions of equity in healthcare. A further focus is on the relationship between health and the aging process. The overall goal is to gain fundamental insights for the preservation and improvement of health.

Minds Media Machines

Cognition, robotics, mediatized worlds – these are the three fields in which researchers explore the complex processes that determine human intelligence and perception. They are working on new intelligent and reliable systems that will enable a smooth exchange between humans and machines. The high-profile area has earned an international reputation, not least grounded in the research field of spatial cognition developed in Bremen. The aim is to develop „Living Technologies“ based on the core cognitive elements found in products such as smartphones and domestic robots. Such artificial intelligence systems are not only intended to assist humans in everyday applications: At the same time, the high-profile area recognizes that humans must always have rights to data privacy and control over the use of their data.



Prof. Dr. Rolf Drechsler
Speaker of the Research Training Group „System Design“, Director of the German Research Center for Artificial Intelligence and a professor in the Faculty of Mathematics / Computer Science at the University of Bremen

„Doctorate from the multiperspective“

„How do robots recognize objects? How can computer components be made to withstand the shock of a rocket launch? How can the technology that surrounds us daily be improved? Questions like this are answered by the research training group System Design (SyDe). The students on this doctoral program benefit extensively from the Alliance. The cooperation between the German Aerospace Center (DLR), the German Research Center for Artificial Intelligence (DFKI) and the University of Bremen creates the interdisciplinary environment required to design the complex systems involved from different research contexts. A successful model!“

Applied Research

Adding value for society

Science is part of society. As a societal actor with the competence to shape, improve and innovate, it serves society by promoting progress and fulfilling important social functions. We integrate external research questions into our research. This, in turn, enriches our research activities. Our members offer a wide range of connecting factors. They develop and optimize processes, products and systems up to the stage of technical and market maturity. In terms of sustainable capacity development, they organize and accompany the processes that enable people, organizations and society to mobilize and expand their capabilities.

„Research in the service of health“

„Bremen provides an excellent environment for applied research in the service of health. Our MR scanner, operated jointly by Fraunhofer MEVIS and the University of Bremen, enables us to develop new methods, such as contrast-free measurement of blood circulation, for instance. Together with the Leibniz Institute for Prevention Research and Epidemiology – BIPS, we are also working on the NAKO Health Study, a nationwide population study on diseases such as cancer, diabetes, dementia and heart attacks.“



Prof. Dr. Matthias Günther
Leader of the MR imaging group at the Fraunhofer Institute for Medical Image Computing and a professor in the Faculty of Physics and Electrical Engineering at the University of Bremen

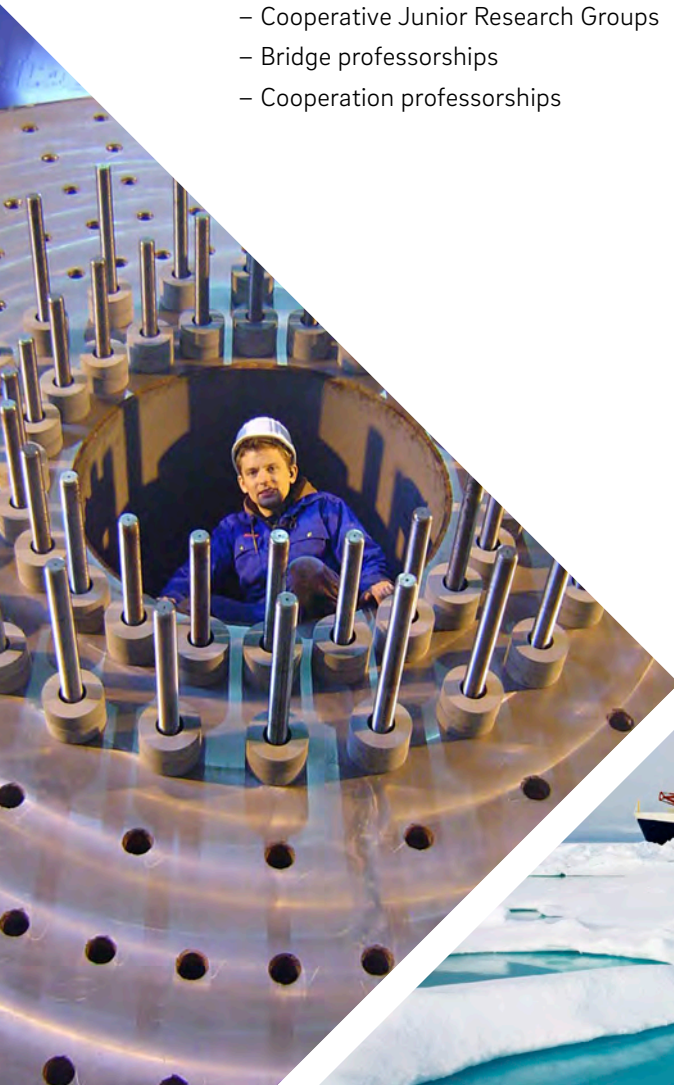


Careers

Independent, but not alone

Why are our early career researchers so happy to be here? Certainly, being able to participate in ambitious research projects is highly motivating; but it's just one reason among many. Just as important are the numerous offers by means of which the Alliance actively promotes their careers. The research assistants of members in the U Bremen Research Alliance are enrolled as doctoral candidates in the University Faculties or one of the numerous doctoral programs and graduate schools. They can gain experience of university teaching and take advantage of the extracurricular training offered by BYRD. Cooperative Junior Research Groups, bridge and cooperation professorships open up exciting prospects. They are independent in their work, but not alone: The Alliance offers every opportunity to make important interdisciplinary and international contacts.

- Support measures offered by the Bremen Early Career Researchers Development (BYRD) for doctoral students and postdocs
- Ph.D. programs and graduate schools
- Cooperative Junior Research Groups
- Bridge professorships
- Cooperation professorships



„Passing on a wealth of experience“

„More time for individual supervision. That's our motto in the Alliance. The door to my office is always open for doctoral candidates. I'm happy to pass on my experience. In addition, we have established several programs designed to advance the careers of young researchers.“



Prof. Dr. Bernd Mayer
Director of the Fraunhofer
Institute for Manufacturing and
Advanced Materials IFAM
and a professor in the Faculty
of Production Engineering at
the University of Bremen





Work

Low on hierarchy: Rich in opportunities

We believe in the power of scientific creativity and imagination. Bureaucracy and hierarchical mind-sets have no place here. At every institution in the U Bremen Research Alliance you will find an area that allows the freedom to develop new ideas, which is the key to successful problem-based research. The borders between its members are fluid. Their laboratories and technical equipment provide researchers with state-of-the-art resources.

„Riding the waves“

Reefs break the power of monster waves. But are they still able to protect low-lying islands in times of climate change? This is the kind of question that interests Dr. Alessio Rovere, a specialist in sea level fluctuations. The native Italian manages the Cooperative Junior Research Group „Sea Level and Coastal Changes“ spread across the Leibniz Center for Tropical Marine Research (ZMT) and the University of Bremen's MARUM Center for Marine Environmental Sciences. Cooperation between the two members of the Alliance gives him the opportunity to conduct research for both institutes – with more resources and the opportunity to exploit synergies.

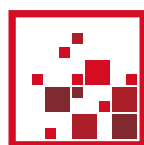


Dr. Alessio Rovere

Leader of the Cooperative Junior Research Group „Sea Level and Coastal Changes“, run by the Leibniz Center for Marine Tropical Research (ZMT) and MARUM - Center for Marine Environmental Sciences at the University of Bremen

Good to feel so welcome

The U Bremen Research Alliance helps its researchers to reconcile work and family life. If required, our Dual Career Welcome Service assists with finding a suitable job for their partner – with employers in or outside the Alliance. We are lucky to have extensive child-care facilities. Currently, the members can offer around 140 nursery and kindergarten places in the direct vicinity of the workplace. In addition, there are many offers and services available to new citizens when they come to Bremen and Bremerhaven.



**U Bremen
Research
Alliance**

**Welcome
Center**

First point of contact for international researchers is the U Bremen Research Alliance Welcome Center. Besides building a new social environment, changing your country of residence entails many non-academic and practical issues. Our team at the Welcome Center is ready to help you with tips and advice. We offer you personal support – even before you arrive: And once you are here, the Alliance has a comprehensive program of events and services to make the process of settling in as easy and pleasant as possible. Welcome to Bremen!





„Ideal conditions for settling in“

„When I arrived here from Australia with my Japanese wife and children, my German skills were not so developed. It was therefore most reassuring to know that the team at the Welcome Center were there to help and always prepared to listen to our needs. It made the start much easier. The whole family has been made to feel very welcome here.“



Dr. Martin Castillo
Leader of the section Materials
Science at the ZARM, Center
for applied Space Technology and
Microgravity at the University
of Bremen

Contact

Get in touch now!

The U Bremen Research Alliance is able to do a lot for you, too. Get in touch now.
We look forward to hearing from you!

Derk H. Schönfeld, MBA

Managing Director U Bremen Research Alliance

Phone: +49 (421) 218 - 60019

derk.schoenfeld@vw.uni-bremen.de

www.uni-bremen.de/research-alliance

U Bremen Research Alliance

c/o Universität Bremen

Bibliothekstraße 1

D-28359 Bremen

Imprint / Credits

Published and edited by: U Bremen Research Alliance

Concept and design: Büro 7 visuelle Kommunikation GmbH

Text: Roger Harders text & konzept

Translation: Daniel Smith, Bremen

Printed by: Print 74

Cover: Universität Bremen | MEVIS | IWES | AWI/T.Steuer | DLR/Eastgate Picture | DSM/Egbert Laska | Universität Bremen | IFAM | Universität Bremen | DFKI | IWT | BIPS | ZMT/Gustavo Castellanos-Galindo | MPIMM | Universität Bremen | DFKI/Florian Cordes | Universität Bremen | AWI/Mar Fernandez | ZMT, p. 2/3: IFAM | ZMT | Universität Bremen (2), p. 4/5: Universität Bremen | Focke Strangmann/ZMT | DFKI, p. 6/7: iStock/Jürgen Sack | Ingrid Krause/BTZ | Fotolia/plan B Werbeagentur | Universität Bremen, p. 8/9: Jan Vetter | ZMT | Eastgate Pictures | Universität Bremen (2), p. 10/11: DFKI/Florian Cordes | AWI/Achim Multhaupt/laif | Thomas Kleiner/GfG, p. 12/13: Privat | WFB/Jonas Ginter, p. 14/15: MEVIS (3), p. 16/17: IWES | AWI/Stefan Hendricks | DFKI/Florian Cordes | IFAM | DLR/Eastgate Picture, p. 18/19: Universität Bremen | IFAM/Thomas Kleiner | ZTM/Mick O'Lear, p. 20/21: WFB/Jonas Ginter | Universität Bremen | iStock/Poike | Universität Bremen



Members of the U Bremen Research Alliance



www.uni-bremen.de/research-alliance

