Helmholtz Association

The Helmholtz Association is a community of 18 scientific-technical and biological-medical research centres. These centres have been commissioned with pursuing long-term research goals on behalf of the state and society. The Association strives to gain insights and knowledge so that it can help to preserve and improve the foundations of human life. It does this by identifying and working on the grand challenges faced by society, science and industry. Helmholtz Centres perform top-class research in strategic programmes in six core fields: Energy, Earth and Environment, Health, Key Technologies, Structure of Matter, Aeronautics, Space and Transport.

Discover where the Association sees those "grand challenges" and what answers it can produce - to secure a sustainable energy supply or forward-looking transport planning solutions, to develop key technologies for the future or therapies for treating diseases which are still incurable today.

The Research-Centres within the Helmholtz Association

Alfred Wegener Institute for Polar and Marine Research
Scientists at the Alfred Wegener Institute for Polar and Marine Research (AWI) are researching the poles, seas and climate. They aim to unravel the changes taking place in the global environment and System Earth which are partly natural and partly caused by human action.

http://www.awi.de

Deutsches Elektronen-Synchrotron (DESY)

DESY is one of the world’s leading accelerator centres. DESY develops, builds and operates large accelerator facilities, which are used to investigate the structure of matter. The combination of photon science and particle physics at DESY is unique in Europe.

http://www.desy.de

German Cancer Research Centre (DKFZ)

The German Cancer Research Centre (DKFZ) in Heidelberg is working to identify and understand the causes of cancer diseases and to improve treatments and therapies.
German Aerospace Center (DLR)
The German Aerospace Center (DLR) headquartered in Cologne is Germany’s national centre for research and technology development in aeronautics and aerospace. In addition DLR holds a leading position in the selected research fields of energy and transportation.

Forschungszentrum Jülich
Health, Energy & Environment, Information and Key Competency: Four core areas make up the profile of the Research Centre in Jülich.

GSI Helmholtz Centre for Heavy Ion Research
The GSI Helmholtz Centre for Heavy Ion Research in Darmstadt uses a modern
accelerator facility to do basic research in physics and also carries out biophysical and radiation medicine research.

http://www.gsi.de

GEOMAR | Helmholtz Centre for Ocean Research Kiel
The centres’ mandate is the interdisciplinary investigation of all relevant aspects of modern marine sciences, from sea floor geology to marine meteorology.

http://www.geomar.de

Helmholtz-Zentrum Geesthacht Centre for Materials and Coastal Research
How will we get our energy in the future? How can we master the threat of climate change? And how can medicine help us respond to demographic change? Researchers at the Helmholtz-Zentrum Geesthacht Centre for Materials and Coastal Research are developing concepts that will provide answers to these
questions.
http://www.hzg.de

Helmholtz-Zentrum Berlin für Materialien und Energie

The Helmholtz-Zentrum Berlin für Materialien und Energie (HZB, former HMI) researches new materials and complex engineering materials. Its work focuses on the connection between the technical properties and microscopic structure of a material. Solar energy research represents the institute's second core research area, especially the development of new solar cell materials.

http://www.helmholtz-berlin.de

Helmholtz-Zentrum Dresden-Rossendorf (HZDR)

How does matter behave in strong fields and at small-scale dimensions? How can malignant tumours be identified at an early stage and treated effectively? How can resources and energy be utilised in an efficient and safe manner? The researchers at the Helmholtz-Zentrum Dresden-Rossendorf are seeking to answer these questions.

http://www.hzdr.de
Helmholtz Centre Potsdam - GFZ
German Research Centre for Geosciences

Helmholtz Centre Potsdam combines all solid earth science fields including geodesy, geology, geophysics, mineralogy and geochemistry, in a multidisciplinary research centre.

http://www.gfz-potsdam.de

Helmholtz Centre for Infection Research (HZI)

The Helmholtz Centre for Infection Research (HZI) in Braunschweig researches infectious disease as well as their prevention and treatment.

http://www.helmholtz-hzi.de

Helmholtz Centre for Environmental Research - UFZ

The UFZ aims to research the interactions between humans and environment in impacted and damaged landscapes. Concepts and processes developed by the UFZ aim to help secure the
natural foundations of life for following generations.

http://www.ufz.de

**Helmholtz Zentrum München-German Research Center for Environmental Health (HMGU)**
The Helmholtz Zentrum München in Neuherberg studies the complex systems of life at the interface between environmental impact and genetic predisposition.

http://www.helmholtz-muenchen.de

**Karlsruhe Institute of Technology (KIT)**
The Karlsruhe Institute of Technology (KIT) was created on 1 October 2009 when the Helmholtz Association’s Forschungszentrum Karlsruhe merged with the Universität Karlsruhe. KIT is one of the world’s largest institutions for teaching and research and has the potential to become an international leader in certain fields. The institute is active in the following areas: energy, climate and environment, nano and microtechnology,
elementary particle physics and astroparticle physics, communication and computation, people and technology, mobility systems, new and applied materials, and optics and photonics.

Max Delbrück Center for Molecular Medicine (MDC) Berlin-Buch

The Max Delbrück Center for Molecular Medicine (MDC) Berlin-Buch combines microbiological basic research with clinical research in order to develop new diagnosis and treatment methods for serious diseases.

Max Planck Institute for Plasma Physics

The Max Planck Institute for Plasma Physics (IPP) in Garching concentrates on nuclear fusion research. Its goal is to emulate on Earth the way the Sun generates energy.