



Curriculum Vitae Prof. (ETHZ)* Dr. Gerald Haug

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Name: Gerald H. Haug
Born: 14 April 1968
in Karlsruhe, Germany



Image: Markus Scholz | Leopoldina

Major Scientific Interests: Paleoclimatology, Marine Geology, Paleoceanography, Climate and Societies

Gerald Haug is a paleoclimatologist, marine geologist and paleoceanographer. He studies the development of the Earth climate over thousands to millions of years. He analyses sediment cores from the sea floor and lakes, amongst several other climate archives. The chemical composition of the different sediment layers provides clues to the prevailing climatic conditions at the time of deposition. This allows quantitative reconstructions of past climate conditions and the underlying processes in the ocean, atmosphere and climate system.

Academic and Professional Career

- since 2020 President of the Deutsche Akademie der Naturforscher Leopoldina – German National Academy of Sciences, Halle (Saale)
- since 2015 Ordinary Professor for Climate Geochemistry, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
- since 2015 Director, Dept. Climate Geochemistry, Max-Planck-Institute for Chemistry, Mainz, Germany
- 2007 - 2015 Ordinary Professor for Climate Geology, ETH Zurich, Switzerland
- 2003 - 2007 Professor (C4), University of Potsdam and Geoforschungszentrum Potsdam (GFZ), Germany
- 2002 Habilitation in Geosciences, ETH Zurich, Switzerland
- 2000 - 2002 Oberassistent, ETH Zurich, Switzerland
- 1998 - 1999 Research Assistant Professor, University of Southern California, Los Angeles, USA

- 1997 - 1998 Postdoctoral Guest Investigator, Woods Hole Oceanographic Institution, Massachusetts, USA
- 1996 - 1997 Postdoctoral Research Associate, Department of Oceanography, University of British Columbia (UBC), Vancouver, Canada
- 1995 - 1996 Postdoctoral Research Associate, GEOMAR, Center for Marine Geosciences, Kiel, Germany
- 1995 Ph.D. at the Geological Institute, University of Kiel, Germany
- 1992 Diploma in Geology, University of Karlsruhe, Germany
- 1987 - 1992 Diploma student in Geology at the University of Karlsruhe, Germany

Current functions in scientific committees

- since 2022 Member of the Zukunftsrat Nachhaltige Entwicklung Rheinland-Pfalz
- Chair of the Science Advisory Board of the Alfred Wegener Institute (AWI) and member of the Governance Board
- Chair of the Science Advisory Board of the Potsdam Institute of Climate Impact Research (PIK)
- Member of the Governance Board of the Karlsruhe Institute of Technology (KIT)
- Member of the Science Commission of Lower Saxony
- Member of the Science Advisory Board of the Swiss Polar Institute
- Member of the Science Advisory Board of the Netherland Earth System Science Center (NESSC)
- Member of the Science Advisory Board of the Werner Siemens Foundation

Honours and Awarded Memberships

- since 2023 Honorary member of the Albanian Academy of Sciences
- since 2023 Foreign Member of the Royal Society, UK
- 2023 Honorary doctorate from the Faculty of Mathematics, Engineering and Natural Sciences at Heidelberg University
- since 2021 Member of the Berlin-Brandenburg Academy of Sciences and Humanities
- since 2018 Member of the Mainz Academy of Science and Literature
- since 2012 Member of the German National Academy of Sciences Leopoldina
- 2010 Rössler-Prize, ETH Zurich
- since 2008 Member of the Academia Europaea

2007 Gottfried Wilhelm Leibniz Prize, German Research Foundation (DFG)

2001 Albert Maucher Prize, German Research Foundation (DFG)

Major Scientific Interests

Gerald Haug is a paleoclimatologist, marine geologist and paleoceanographer. He studies the development of the Earth climate over thousands to millions of years. He analyses sediment cores from the sea floor and lakes, amongst several other climate archives. The chemical composition of the different sediment layers provides clues to the prevailing climatic conditions at the time of deposition. This allows quantitative reconstructions of past climate conditions and the underlying processes in the ocean, atmosphere and climate system.

The findings of paleoclimate research play a central role in the investigation of the causes of climate change and climate threshold levels, but especially with regard to understanding the dynamics of the climate system. Haug and his team were thus able to show that a more stable physical stratification of the water surface in the sub-arctic North Pacific, as well as in the Southern Ocean around the Arctic, reduced the biological activity of the cold periods. Questions about the reversibility of such abrupt climate thresholds are of considerable importance for the estimation of future climate scenarios especially in times of rapidly rising atmospheric greenhouse gas concentrations and the concomitant global warming.

In addition, Haug studied the interactions between climate and cultures. By investigating core samples from off the coast of Venezuela he was able to find evidence of historical periods of drought that were correlated in time with the fall of the Mayan civilization. Haug also found clues to the impact of climate change on historical developments in other regions, such as a relationship between times of weakened monsoons and the demise of several Chinese dynasties.

* Gerald H. Haug holds a full professorship at the Swiss Federal Institute of Technology Zurich (Switzerland) since 2007. According to the principle of title transparency, the addition "(ETHZ)" is required when naming the title.