

Call for abstracts, open until June 15th

GeoBremen ²⁰/₁₇

The System Earth
and its Materials –
from Seafloor to Summit

Joint Meeting of
DGGV and DMG

Bremen, Germany
September 24 – 29, 2017

Second Circular

Registration and abstract submission will be open from March 15th

www.GeoBremen17.de

From seafloor to summit

We welcome you cordially to Bremen, a charming modern city with a touch of hanseatic flair located at the banks of the Weser river and close to the North Sea coast.

GeoBremen 2017, organized by the Deutsche Mineralogische Gesellschaft (DMG) and the Deutsche Geologische Gesellschaft – Geologische Vereinigung (DGGV), will provide a multidisciplinary stage with a focus on the exciting themes and topics of the Earth and Material Sciences of the 21st century.

From seafloor to summit, from the Harz Mountains to the Himalayan, from geology to oceanography, from petrology to mineralogy, from inorganic geochemistry to geobiology, from low to high temperatures and pressures, from the crust to the core, from the field to the lab, and from the Earth to the stars, we expect exciting scientific contributions, hot discussions, and new ideas.

We welcome you to participate and are looking forward meeting you in Bremen in September 2017!

Conference program

The conference will comprise scientific sessions, plenary and keynote lectures, poster sessions, workshops, and field trips.

Scientific themes

- Dynamic Earth – from the interior to the surface
- Magmatic and metamorphic systems
- Geosphere-biosphere-interactions
- Solid-liquid-interface reactions
- Earth history and global change
- Early Earth and evolution of planets
- Sedimentary systems
- Energy, materials, resources
- Archaeometry and outreach
- Open session

Plenary lectures

Nanoscience / Crystallization

Prof. Dr. Helmut Cölfen (University of Konstanz)

Neotectonics

Prof. Dr. Todd Ehlers (University of Tübingen)

Hazards / Impact

Prof. Dr. Sean Gulick (University of Texas, USA)

Seafloor processes

Prof. Dr. Susan Humphris (Woods Hole Oceanographic Institution, USA)

Pilbara / Early life

Prof. Dr. Martin van Kranendonk (University of Sydney, Australia)

Workshops

Tropical coral archives – Reconstructions of climate and environment beyond the instrumental record at society-relevant timescales

Thomas Felis, Miriam Pfeiffer, Jens Zinke

Introduction to thermodynamic modeling with Theriak-Domino software

Erik Duesterhoeft, Romain Bousquet

Field trips

- **Wilhelmshaven / Wadden Sea / island of Spiekeroog** (Andre Freiwald)

- **Coastal dynamics – the tidal Weser- and Ems estuaries** (Christian Winter, Marius Becker)

- **Steel mill Bremen – one of the most productive factories of Arcelor Mittal** (Michael Wendschuh)

- **Moor Gnarrenburg – Geo- and Biotope** (Joachim Blankenburg)

- **Rheinisches Schiefergebirge – Givetian volcanoes and reefs** (Rüdiger Henrich, Wolfgang Bach)

- **Baltic Sea islands: Rügen and Usedom** (Gösta Hoffmann)

- **North Sea island: Helgoland** (Torsten Bickert)

- **The Quaternary of Schleswig-Holstein – new sites** (Alf Grube, DEUQUA)

[Click on session title will open website with session abstract!](#)

Theme 1: Dynamic Earth – from the interior to the surface

(Cornelia Spiegel, Anke Friedrich, Birgit Terhorst)

Session 1.1: Geohazards in time and space

Birgit Terhorst, Andreas Vött, Bernd Zimanowski

Session 1.2: Archives of Quaternary climatic and environmental changes

Daniela Sauer, Tobias Sprafke, Achim Brauer

Session 1.3: Controlling factors of surface evolution

Cornelia Spiegel, Anke Friedrich

Session 1.4: From rifts to passive continental margins: mantle-, and lithosphere-basin dynamics, and long-term landscape evolution

Ulrich A. Glasmacher, Magdalena Scheck-Wenderoth, Hans-Peter Bunge, Peter Kukla

Session 1.5: High latitude geodynamic and environmental evolution

Frank Lisker, Cornelia Spiegel

Theme 2: Magmatic and metamorphic systems

(Wolfgang Bach, Francois Holtz, Gerhard Wörner)

Session 2.1: Mass transfers in oceanic spreading centers

Christoph Beier, Jürgen Koepke, Colin Devey, Wolfgang Bach

Session 2.2: Intraplate volcanoes: evolution, processes and hazards

Christoph Breßler, Andreas Klügel, Thomas Walter

Session 2.3: Processes in layered mafic magma chambers and formation of associated ore deposits

Olivier Namur, Kathrin Faak, Robert Trumbull, Ilya Veksler

Session 2.4: Compositional evolution, dynamics and physical properties of Earth's mantle

Sergio Speciale, Andreas Stracke, Hauke Marquardt, Dan Frost

Session 2.5: Subduction zone magmatism and crustal evolution

Gerhard Wörner, Karsten Haase

Session 2.6: High-resolution geochronology and isotope tracing of high-temperature geological processes

Winfried Schwarz, Jörn-Frederik Wotzlaw, Stefan Weyer

Session 2.7: Rates and timescales of magmatic and metamorphic processes

Sumit Chakraborty, Horst Marschall, Andreas Stracke

Theme 3: Geosphere-biosphere-interactions

(Jörn Peckmann, Joachim Reitner, Kai-Uwe Hinrichs)

Session 3.1: Stable isotope proxies in space and time: Processes, preservation and potential

Michael Böttcher, Dorothee Hippler, Patrick Meister

Session 3.2: Microbial life in subsurface sediments: Key drivers of global biogeochemical cycles

Jens Kallmeyer, Kai-Uwe Hinrichs

Session 3.3: Going deep: Tracking life processes through time and space

Joachim Reitner, Jan-Peter Duda, Christine Heim

Session 3.4: Geomicrobiology - from understanding processes in ancient and modern environments to industrial applications

Andreas Kappler, Jörn Peckmann

Session 3.5: Coastal depositional environments & processes

Thomas Mann, Tim Jennerjahn, Nils Moosdorf, Alessio Rovere

Theme 4: Solid-liquid-interface reactions

(Andreas Lüttge, Torsten Stumpf, Falko Langenhorst)

Session 4.1: Geo-radiochemistry

Thorsten Stumpf

Session 4.2: Fluid-rock interactions: from mechanisms to rates – from atom to plate

Oliver Plümper, Johannes Vrijmoed, Helen King, Christof Kusebauch

Session 4.3: Reactions at mineral-water interfaces in the Earth Sciences: theory and experiment

Mariëtte Wolthers, Jörn Hövelmann, Cornelius Fischer

Session 4.4: Gas-liquid/gas-solid interface reactions in geosystems

Christian Ostertag-Henning, Andreas Busch, Axel Liebscher

Session 4.5: Applied materials: Reactions at interfaces

Luc Nicoleau

Theme 5: Earth history and global change

(Simone Kasemann, Michal Kucera, Thomas Westerhold)

Session 5.1: The last deglaciation

Michael Sarnthein, Wolfgang Kuhnt

Session 5.2: Tropical coral archives – Reconstructions of climate and environment beyond the instrumental record at society-relevant timescales

Thomas Felis, Miriam Pfeiffer, Jens Zinke

Session 5.3: Palaeogeography through geologic time

Guido Meinhold, A. M. Celâl Şengör

Session 5.4: Lacustrine and marine sediments as environmental archives

Torsten Haberzettl, Thomas Kasper

Session 5.5: Dynamic reorganization of coastal regions since the Last Glacial Maximum – Learning from the past

Daniel A. Hepp, Tobias Mörz

Theme 6: Early Earth and evolution of planets

(Stefan Weyer, Torsten Kleine, Carsten Münker)

Session 6.1: Cosmochemistry / planetology / asteroidal processes

Dominik Hezel, Christoph Burkhardt

Session 6.2: Earth interior – mantle and core

Stephan Klemme, Christopher Beyer

Session 6.3: Early crust

Axel Gerdes, Elis Hofmann

Session 6.4: Evolution of the Early Earth's atmosphere, oceans and biosphere

Michael Bau

Session 6.5: Precambrian biotic and environmental (co-)evolution

Benjamin Nettersheim, Arne Leider, Christian Hallmann

Theme 7: Sedimentary systems

(Rüdiger Henrich, Hilmar von Eynatten, Maria Mutti, Harald Stollhofen)

Session 7.1: Young sedimentologists

Ulrich Heimhofer, Michaela Spiske

Session 7.2: Chemostratigraphic and biotic events in Earth history

Christoph Korte, Clemens V. Ullmann

Session 7.3: Epicontinental basins - sedimentary facies, land-sea transition and provenance

Matthias Hinderer, Hilmar von Eynatten

Session 7.4: Sedimentology of coastal hazards – storms, tsunamis, and sea level change

Michaela Spiske, Heinrich Bahlburg

Session 7.5: Carbonate mounds through time and space: from organisms to giant sedimentary structures

Dierk Hebbeln, Christian Dullo, André Freiwald, Elias Samankassou

Session 7.6: From source to sink: Environmental signal propagation into the stratigraphic record

Hella Wittmann-Oelze, Anne Bernhardt

Theme 8: Energy, materials, resources

(Christoph Berthold, Reiner Klemm, Ralf Littke)

Session 8.1: Hydrothermal systems and related mineral and geothermal resources

Philipp Weis, Thomas Wagner

Session 8.2: Structure, properties, and applications of crystalline materials

Michael Fischer

Session 8.3: Economic geology of critical raw materials

Volker Lüders, Michael Bau, Torsten Graupner

Session 8.4: Marine minerals of the deep sea: resources, environment and ecology

Annemiek Vink, Carsten Rühlemann

Session 8.5: Spectroscopic 2D-methods: Multiscale imaging spectroscopy

Dieter Rammlmair, Michaela Frei

Session 8.6: Geothermal heat supply in areas of high population density

Sebastian Bauer, Ralf Köber

Theme 9: Archaeometry and outreach

(Lutz Hecht, Gerold Wefer)

Session 9.1.: Archaeometry and monument conservation

Klaus Bente, Christoph Berthold, Susanne Greiff

Session 9.2: New developments in science communication (Neue Initiativen in der Wissenschaftskommunikation)

Herbert Munder, Gerold Wefer, Lutz Hecht

Theme 10: Open session

(Wolfgang Bach, Andreas Lüttge, Gerold Wefer)

Session 10.1: Applications in 3D geological modelling

Rouwen Lehné, Christian Müller

Session 10.2: Methane- and methane-hydrate-related processes at margins around the Arctic Ocean

Gerhard Bohrmann, Giulina Panieri, Christian Berndt, Stefan Bünz

Session 10.3: Tectonic systems

Nikolaus Froitzheim, Michael Stipp, Kamil Ustaszewski

Session 10.4: Advances in scientific drilling in the oceans and on the continents

Ursula Röhl, Thomas Wonik, Ulrich Harms