3rd World Stress Map Conference

15.-17. October 2008

of the Heidelberg Academy of Sciences and Humanities

at the GFZ Potsdam, Germany

Frontiers of Stress Research:
Observation, Integration and Application

Second Circular

www.world-stress-map.org/conference

Introduction

The World Stress Map (WSM) started in 1985 as a task force of the International Lithosphere Program (ILP). Since 1996 it is located at the Geophysical Institute of the Universität Karlsruhe (TH) as a project of the Heidelberg Academy of Sciences and Humanities. The future of the WSM is secured as the GeoForschungsZentrum Potsdam has agreed to incorporate the WSM into its research structure and will provide resources for maintaining and developing it. The conference is co-sponsored by the International Union of Geodesy and Geophysics (IUGG) and the ILP Task Force VII.

Scope of the Conference

Knowledge of the stress state and its link to deformation is an important issue for a wide range of practical applications like stability aspects of underground openings, the enhanced productivity of hydrocarbon and geothermal reservoirs, and seismic hazard assessment. Stress and strain observations are also critical for resolving questions related to, e.g., the driving forces of plate tectonics.

A major focus of this conference is to present modern concepts on stress and strain measurement techniques and data analysis, integrated studies including numerical modelling, and the application of stress information in petroleum, mining, engineering, geothermal studies, and CO_2 sequestration.

Conference Topics

I. Observation
- stress, strain, structure, and strength of the lithosphere
- stress measurement techniques (including stress magnitudes and paleostress analysis)
- observations of strain accumulation and strain release on different temporal and spatial scales
- impact of geological and rheological structure of the lithosphere on the stress field

II. Integration
- modelling of stress and strain in the lithosphere
- time- and scale-dependent deformation processes
- modelling of the absolute stress state and its changes with time (inter-, co-, and postseismic)
- simulation of fracture propagation, fluid flow, and pore pressure variations

III. Application
- geomechanics for petroleum and geothermal reservoirs
- stability aspects of underground openings
- seismic hazard assessment

Key Note Speakers

Hermann Drewes (DGFI, Germany)
Richard Hillis (University of Adelaide, Australia)
Onno Oncken (GFZ Potsdam, Germany)
Richard Plumb (Schlumberger, Boston, USA)
Mark Zoback (Stanford University, USA)
Mary-Lou Zoback (RMS Inc., Newmark, USA)

Preliminary Schedule

Date	Time	Event
14. October	19:00 - 22:00	Registration & ice breaker party
15. October	09:00 - 18:30	Opening, oral & poster sessions
16. October	09:00 - 19:30	Oral & poster sessions
17. October	09:00 - 13:00	Oral sessions & final discussion
	19:00 - 22:00	Reception in Berlin
18. October	09:00 - 13:00	Field trip to the CO_2 sequestration project in Ketzin

Scientific Committee

Tony Addis (Shell), John Cook (Schlumberger, Cambridge), Georg Dresen (GFZ Potsdam), Terry Engelder (Pennstate University), Roy Gabrielsen (University of Bergen), Domenico Giardini (ETH Zürich), Richard Hillis (University of Adelaide), Richard Plumb (Schlumberger, Boston), Sergei Shapiro (FU Berlin), Ove Stephansson (KTH Stockholm), Mark Tingay (University of Adelaide), David Yale (Exxonmobile, Houston), Mark Zoback (Stanford University)

Registration & Abstract Submission

Please register online at the conference website at www.world-stress-map.org/conference and indicate if you intend to give a presentation including an abstract limited to 400 words. The text should be written in English. In order to foster intense communication and discussion, please note that the number of participants is limited to 100.

Deadlines & Fees

Registration and abstract submission	30. April 2008
Acceptance of registration & abstracts	15. May 2008
Acceptance of papers for the special volume	15. May 2008
Submission of papers for the special volume	15. August 2008

The conference fee of 150 € includes lunch, coffee, tea, and soft drinks during the conference days. Financial support for a limited number of young scientists and scientists from the developing world is offered.

Special Volume in Tectonophysics

Complementary to the conference, we invite you to contribute to a special volume of Tectonophysics on *Frontiers of Stress Research* edited by Oliver Heidbach, Mark Tingay, Friedemann Wenzel, and Markus Rothacher. Please indicate via e-mail or on the conference registration website whether you intend to submit a paper.

There will be no delay in online publishing of each contribution for the special issue once the review process is concluded. Furthermore, submission of manuscripts is not restricted to the participants of the conference, but is open to the stress research community.

Hotel Reservation & Transport

Special arrangement has been made at the Mercure Hotel Potsdam (www.mercure.com/mercure/fichehotel/gb/mer/1582), that is at a walking distance to the GFZ Potsdam (20 min.). Costs per night are 80 € for a single and 95 € for a double room, both incl. breakfast. Please use the key word „WSM conference" when you arrange your booking. Booking must be proceeded via e-mail (H1582-RE1@accor.com) or fax +49-331-293 496. Pre-reservation of the rooms is valid until 31. August.

Directions to the GFZ and to Potsdam are given on the GFZ website at www.gfz-potsdam.de/html/welcome/maps. General tourist information is available at www.potsdam.de.

Organizing Committee

Friedemann Wenzel (Heidelberg Academy of Sciences and Humanities)
Oliver Heidbach (Geophysical Institute, Universität Karlsruhe)
Onno Oncken (GFZ Potsdam)
Markus Rothacher (GFZ Potsdam)