

# GeoMod 2008

Florence, Italy  
22-24 September 2008



[www.geomod2008.org](http://www.geomod2008.org)

First circular

## BACKGROUND

Knowledge of geological processes requires a multiscale and multidisciplinary approach combining observations, theory and interpretation. In this context, geological modelling (both analogue and numerical) has become a strategic tool to link direct geological observations with interpretations, and to improve our understanding of the 4D evolution of geological structures.

The GeoMod2008 represents a follow-up of the two successful geological modelling meetings held in Milan (RealMod2002) and Lucerne (GeoMod2004). The conference will offer the opportunity to present and discuss the latest research results, and aims to bring together researchers from universities and industries who deal with analogue and/or numerical modelling. Particularly welcome are contributions entailing a strong interaction between modelling results and geological data from real-world case studies.

The main topics of the conference will include:

### ***Rheology and Tectonics***

Advances in understanding Earth rheology, crust and mantle rheology from micro- to mega-scale, strength of the lithospheric multilayer, coupling of deformation from crust to mantle

### ***Mountain Building and Thrust Systems***

Continental collision, dynamics and kinematics of thrusting, relations between magmatism and deformation, role of decollement layers

### ***Subduction Zones***

Dynamical aspects of subduction zones, subduction zone rheology, thermal structure, accretionary wedges, HP and UHP exhumation

### ***Lithospheric Extension***

Dynamics and kinematics of rifting, role of lithosphere rheology, relations between magmatism and deformation, mantle plumes, evolution and architecture of normal fault systems

### ***Basins and Sedimentary Budget***

Foreland basins, extensional basins, salt tectonics, basin inversion, hydrocarbon accumulation and migration

### ***Surface Processes***

Coupling deep and Earth surface processes, link between climate/surface processes/tectonics, erosional processes, relief dynamics, geomorphological processes

## CONFERENCE FORMAT

Three days will be devoted to plenary lectures and poster sessions. In morning sessions, invited speakers will present state-of-the-art model studies and identify future developments in their discipline; extensive discussions about the topics will follow the talks. Ample time will be allotted to poster presentations in afternoon sessions.

## PRE-CONFERENCE WORKSHOP

Sunday 21 September participants to the Geomod can attend a modelling workshop (organized by Susanne Buiter and Guido Schreurs) to discuss technical challenges related to the simulation of crustal deformation processes. Topics include (1) the numerical requirements for successful simulation of granular material behaviour, (2) the quest for new analogue modelling materials and (3) the quantification of mechanical properties of analogue materials. An important focus will lie on the new comparison of analogue and numerical model results of two prescribed experiments. We therefore invite analogue and numerical modellers to participate in two brittle comparison experiments with the aim to constrain and quantify the variability among models and to improve our understanding of the causes of differences. In addition, in collaboration with GFZ Potsdam, we offer the possibility for analogue laboratories to have their sand properties quantified with a Schulze ring-shear tester.

## POST-CONFERENCE FIELD TRIP

On September 25-26, there is the opportunity to take part in a comprehensive traverse through the Northern Apennines. This field trip will encompass the whole fold-and-thrust belt, from Tyrrhenian side to the Po Plain margin. The field trip will be guided by Marco Bonini and Federico Sani (more details on the congress web page).



## SCIENTIFIC COMMITTEE

Roger Buck (Lamont Doherty Earth Observatory, Palisades, USA)  
Alexander Cruden (University of Toronto, Toronto, Canada)  
Jean-Marc Daniel (Institut Français du Pétrole, Rueil-Malmaison, France)  
Claudio Faccenna (Università di RomaTre, Rome, Italy)  
Manel Fernandez (Inst. of Earth Sciences 'Jaume Almera', CSIC, Barcelona, Spain)  
Luca Ferrari (Universidad Nacional Autónoma de México, Queretaro, Mexico)  
Gianreto Manatschal (Université Louis Pasteur, Strasbourg, France)  
Luc Lavier (University of Texas, Austin, USA)  
Onno Oncken (GeoForschungsZentrum, Potsdam, Germany)  
Giorgio Ranalli (Carleton University, Ottawa, Canada)  
Dimitrios Sokoutis (Vrije Universiteit, Amsterdam, The Netherlands)  
Basil Tikoff (University of Wisconsin, Madison, USA)

## ABSTRACTS

Participants are invited to present extended abstracts of their contributions which will be published in a special issue of an international journal (Bollettino di Geofisica Teorica ed Applicata). Authors may submit on line abstracts from February 1, 2008 to April 15, 2008.

## PRE-REGISTRATION

It will be possible to pre-register on line from December 1, 2007. Please give (1) Full name and contact address, (2) Provisional title of contribution, (3) (tentative) Attendance of pre-conference workshop and post-conference fieldtrip.

## LOCATION

GeoMod 2008 will be held in La Pietra – International Conference & Events Center in Florence. La Pietra, New York University's 57-acre nestled in the hills of Florence, preserves its historic furnishings as well as the famous Harold Acton Art Collection. It is surrounded by one of the most beautiful garden in Italy, also created by Acton (a guided tour of both the garden and the art collection will be organized during the conference).

The Conference center is located on Via Bolognese 120, it can be reached by Bus from downtown (ATAF bus n. 25), it takes no more than 20 minutes from the Central Station of Florence; the bus stops just in front of the gate of the Villa, otherwise you can reach also by car; inside the Villa, there is ample parking on the grounds at disposal of the guests of the Conference center. For other information please visit the website:

<http://www.nyu.edu/lapietra/home.html>  
<http://www.lapietracorporation.com>



## ACCOMODATION

Please check the hotel list on the conference website.

## ORGANISING COMMITTEE

Giacomo Corti (CNR-IGG, Firenze)  
Marco Bonini (CNR-IGG, Firenze)  
Piero Manetti (Università' di Firenze)  
Giovanna Moratti (CNR-IGG, Firenze)  
Federico Sani (Università' di Firenze)

## ORGANISING SECRETARIAT

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