



## Third M.I.T. Conference on Computational Fluid and Solid Mechanics

June 14 - 17, 2005  
at the Massachusetts Institute of Technology,  
Cambridge, USA

<http://www.thirdmitconference.org>

### Mini-Symposium Computational Fluid and Solid Geodynamics: Methods and Challenges

Dear Colleagues,

It is a pleasure to invite you to participate in the symposium “Computational Fluid and Solid Geodynamics: Methods and Challenges” to be held in the framework of the Third M.I.T. Conference on Computational Fluid and Solid Mechanics, M.I.T., Cambridge, USA, June 14-17, 2005. It will give geoscientists the opportunity to meet experts in fluid and solid dynamics and computational mathematics and exchange ideas about modern numerical approaches and techniques.

The main objective of this symposium is to bring together applied mathematicians and geophysicists dealing with modeling of deformations of the solid Earth and to discuss key problems of numerical methodologies and computational approaches to be used in these studies. The geophysical topics of the sessions are proposed to be: (1) mantle thermal and thermo-chemical circulations with continental and oceanic plates incorporated; (2) nonlinear fluid dynamic modeling of plate behavior including lithospheric instabilities; (3) crustal and lithospheric deformation; evolution of descending slabs; (4) evolution of mantle plumes and magma chambers; and (5) core-mantle interaction and geodynamo. We encourage presentations of mathematical models of the geodynamic problems and novel efficient computational procedures rather than the model results themselves. The symposium is an excellent chance to establish strong links between experts in computational fluid and solid mechanics and in computational geodynamics.

#### Organizers of the Symposium

Dr. **Alik Ismail-Zadeh**  
Geophysical Institute,  
University of Karlsruhe,  
Hertzstr. 16, Karlsruhe  
76187, Germany.

Tel.: +49 721 608 4610  
Fax: +49 721 71173  
E-mail: [alisk.ismail-zadeh@gpi.uni-karlsruhe.de](mailto:alisk.ismail-zadeh@gpi.uni-karlsruhe.de)

Prof. **Gary Glatzmaier**  
Department of Earth  
Sciences, University of  
California, Santa Cruz,  
CA 95064, USA

Tel.: +1 831 459 5504  
Fax: +1 831 459 3074  
E-mail: [glatz@es.ucsc.edu](mailto:glatz@es.ucsc.edu)

Prof. **Hans Muhlhaus**  
Department of Earth  
Sciences, The University of  
Queensland, St Lucia, QLD  
4072, Australia.

Tel: +61 07 3365 4783  
Fax: +61 07 3365 7347  
E-mail: [muhlhaus@quakes.uq.edu.au](mailto:muhlhaus@quakes.uq.edu.au)

Prof. **Paul Tackley**  
Department of Earth and  
Space Sciences, University  
of California, Los Angeles,  
CA 90095-1567, USA

Tel.: +1 310 206 9180  
Fax: +1 310 825 2779  
E-mail: [ptackley@ess.ucla.edu](mailto:ptackley@ess.ucla.edu)

## Call for Papers/Abstracts

Prospective authors are invited to submit EITHER a Short Paper after July 15, 2004 and prior to September 30, 2004, OR a one-page Abstract by March 15, 2005. Each Short Paper and each Abstract must correspond to a separate presentation (25 minutes each) at the Conference. The format of the Short Paper and Abstract can be found on the web page of the Third M.I.T. Conference <http://www.thirdmitconference.org>.

The paper or abstract should be sent to one of the organizers of the Symposium “Computational Fluid and Solid Geodynamics: Methods and Challenges”. Authors of the short papers will be informed prior to December 30, 2004 regarding acceptance of their papers for presentation at the Conference and publication in the Proceedings. The accepted papers will be published in the bound and CD-ROM versions of the Proceedings at the time of the Conference. Authors of the abstract will be informed prior to April 15, 2005 regarding acceptance of their papers for presentation at the Conference and publication in the Volume of the Conference Abstracts.

Note: for previous M.I.T. Conferences, about one-third of the submitted short papers were rejected. Clearly, there has been a large interest in these M.I.T. Conferences and a considerable increase in attendance from the first two Conferences. A key aspect of the Conferences was the excellent quality, and the Organizing Committee aims to have an even better quality for the Third Conference.

## Conference Fellowships

About one hundred young researchers from any part of the world will be fully supported to attend the Conference. A Fellowship provides for all travel expenses, Conference fees, accommodation expenses in M.I.T. on-campus housing, and a personalized Fellowship Certificate. Fellowship awardees are expected to present a paper at the Conference. Fellowship applicants must be less than about 30 years of age at the time of the Conference, and must submit a Short Paper (of the form described in the Call for Papers), a personal one-page letter of application (specifying why the Fellowship is sought) and two letters of recommendation. The paper should be submitted as specified above but the letter of application and the letters of recommendation should be faxed to USA (617) 923-3408. E-mail letters of application and recommendation will not be considered. Applicants will be notified prior to December 30, 2004 (provided the application was received prior to September 30, 2004) as to whether they have been awarded a Fellowship.

### The Second M.I.T. Conference Fellowship Awardees



The Conference awardees P. Livermore (Leeds University), P. Mihalfy (University of Frankfurt), and J. Hernlund (UCLA) were participants of the symposium on computational fluid geodynamics (M.I.T., June 2003).

## Intention to Contribute

Potential participants of the Symposium are kindly asked to fill the Form of Intention and send it by e-mail to [Alik.Ismail-Zadeh@mpi.uni-karlsruhe.de](mailto:Alik.Ismail-Zadeh@mpi.uni-karlsruhe.de) before **July 15, 2004**. Complete information regarding the Third M.I.T. Conference on Computational Fluid and Solid Mechanics can be found at web-site: <http://www.thirdmitconference.org>

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Computational Fluid and Solid Mechanics  
June 14 - 17, 2005  
at the Massachusetts Institute of Technology, Cambridge, USA**

### **Symposium “Computational Fluid and Solid Geodynamics: Methods and Challenges”**

#### INTENTION TO CONTRIBUTE

Title

Family name, First name

Institution

Address, City, Zip Code, Country

Fax number

E-mail address

- |   |     |    |
|---|-----|----|
| - Do you intend to attend the Symposium?              | YES | NO |
| - Are you going to present paper(s) at the Symposium? | YES | NO |

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### **Important dates**

<b>July 15, 2004</b>	Start of Short Paper and Abstract submissions
<b>September 30, 2004</b>	Deadline for submission of Short Papers
<b>September 30, 2004</b>	Deadline for submission of applications for Conference fellowship
<b>December 30, 2004</b>	Notification of acceptance of Short Papers
<b>March 15, 2005</b>	Deadline for submission of Abstracts
<b>April 15, 2005</b>	Notification of acceptance of Abstracts
<b>June 14 - 17, 2005</b>	Third M.I.T. Conference on Computational Fluid and Solid Mechanics