

HOTEL INFORMATION

The Conference venue Cachan is a close suburb of *Paris* located at a very short distance from the city southern gate - Porte d'Orleans. Cachan can easily be reached from any of two Paris airports, Orly and Roissy CdG, either by using the public transportation with fast underground line *RER B*, or a taxi ride (see Figure with 'Plan d'Acces'). Further *travel* details can be obtained from the *meeting web page*.

The Paris suburb of Cachan provides a wide variety of accommodation possibilities, including three hotels within walking distance (10-15 min) from the venue:

- Hotel "Bed" 23 avenue Carnot, 94230 Cachan, Phone: +33146638282
- Hotel "Kyriad" 2 rue Mirabeau, 94230 Cachan, Phone: +33146652252
- Hotel "Alixia" 82 avenue du general Leclerc, Phone: +33146605656, Fax: +33146605734

Other hotels can be found in Paris, preferably close to RER B line of Paris underground transportation.

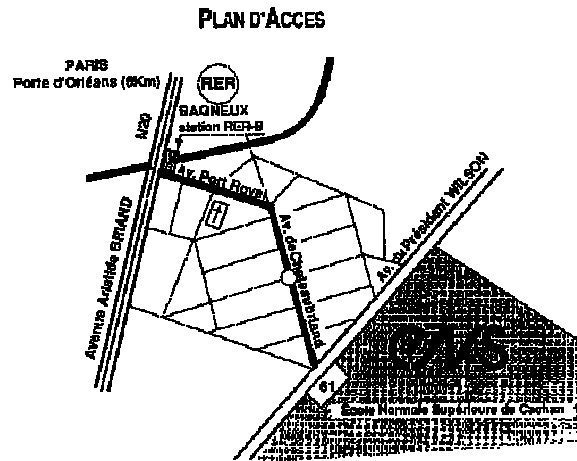
CONFERENCE WEB PAGE

The further announcements, the final conference program and all detailed information about the conference will be made available at the *meeting web page*:

<http://www.msf.ens-cachan.fr/>

All abstracts (up to 4 pages) should be sent to:
(deadline: **May 31, 2007**)

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**Multi-scale Computational
Methods for Solids and Fluids**

November 28 – 30, 2007



Paris (ENS-Cachan), France 

Co-organized by:
Institut FARMAN

*Laboratoire de Mécanique et Technologie
Centre de Mathématiques et de Leurs Applications
Ecole Normale Supérieure de Cachan, France*

*Institut für Wissenschaftliches Rechnen
TU Braunschweig, Germany
Institut für Baumechanik und Numerische
Mechanik, Universität Hannover, Germany*

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INVITED LECTURES

Allix O., LMT-Cachan, France

Boucard P-A., LMT-Cachan, France

Bouche D., CMLA, Cachan, France

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Pommier S., LMT-Cachan, France

Rey C., LMT-Cachan, France

Sicard J., LMT-Cachan, France

Torrenti J-M., LMT-Cachan, France

CONFERENCE OBJECTIVES

The main idea of this thematic conference is to examine the recent advances from mechanics and from applied mathematics in a currently very active research domain of multi-scale modeling and computations in solid and fluid mechanics. The latter involves the methods which bridge phenomena taking place at multiple scales in space and time and which ought to be placed in interaction or accounted for simultaneously in order to provide the most reliable explanation. This class of problems calls for the development and combination of different analytical tools (homogenization, asymptotic analysis) and computational methods (parallel computing, stochastic analysis) in order to advance the field towards currently relevant nonlinear applications. A number of different schools have developed in various domains of fluids and solids, both in mathematics and mechanics, with sometimes very little or no interaction at all. It is an explicit goal of this thematic conference, in the true spirit of ECCOMAS, to bring these different communities together, and thus provide a sound basis for a fruitful exchange of ideas among them.

The conference seeks also to provide a *forum for learning* from some of the world leading specialists in analysis and design of complex engineering structures and systems, coming from aerospace, civil and mechanical engineering, material science, and in the design and analysis of numerical algorithms from applied mathematics. The main goal is elaborating the multi-field and multi-physics approach, which has significantly modified previously firm frontiers among these traditional engineering disciplines.

CONFERENCE TOPICS

Heterogeneous materials

Multi-phase materials

Mechanics of porous media

Masonry structures

Complex structures

Adaptive modeling

Turbulence

Wave propagation

Complex fluids

Multi-phase flow

Flow through porous media

Debris flow

Computational multi-scale strategies

Stochastic multi-scale approach

Probabilistic models

Fluid-structure interaction problems

Coupled problems

Identification

Control problems

A number of *oral* and *poster* presentations from *other participants* will be included in the final program; thus providing them with an excellent opportunity to discuss their ideas.

All accepted papers will be published in the *book of extended abstracts*. Moreover, *special issues of scientific journals* are already scheduled for publishing full-size papers selected among the proposed abstracts.

CALL FOR PAPERS

Prospective authors are invited to submit an *extended abstract* of approximately 1000 words (*4 pages*) to Professor Adnan Ibrahimbegovic by **May 31, 2007**, containing the title of the proposed communication, the full address (including an e-mail) and the name of the corresponding author. The authors are encouraged to indicate to which main conference topic their contribution should be related. Submission can be made either by regular *mail* or by *e-mail*.

CALENDAR

May 31, 2007 Deadline of abstracts submission

June 30, 2007 Notification of final acceptance

September 30, 2007 Deadline for early registration

November 28-30, 2007 Conference held in Cachan

REGISTRATION FEES

Conference registration fees of **390 Euros** cover the conference package with: book of abstracts, admission to complete scientific program, welcome reception, lunches, conference dinners, coffee breaks and banquet.

SOCIAL PROGRAM

Banquet dinner will be organized in Paris. More information will be given in the Final Announcement and through the *meeting web page*. *Pre-registration* for participants and accompanying persons is required.