

Application form

First Name	Family Name
Affiliation	
Address	
Zip code	City
Country	
Phone	Fax
Email	

Payment

- By check to the SMAI CEMRACS
- By bank transfer
- By order form (french institutions only)

Request for financial support

(young researchers only, see General informations)

- yes
- no

Date	Signature
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Please, return this form filled to

CEMRACS 2012  
 Institut Camille Jordan, Université Lyon 1  
 43 boulevard du 11 novembre 1918  
 69622 Villeurbanne Cedex France  
 FRANCE

General informations

Fees for housing and meals

- Single room, 3 meals: ..... 90 euros per day
- Double room, 3 meals: ..... 82 euros per day

Registration fees for the Summer School:

- Standard: ..... 550 euros
- Academic: ..... 220 euros
- Student: ..... 110 euros
- Free for CNRS agents

Application process (according to availability): to apply to CEMRACS 2012, please use rather the online application form available at the following address:

<http://smai.emath.fr/cemracs/cemracs12>

Otherwise, use the included application form and send it to the mentioned address. Payments should be made - only in euros - by sending a check or an order form to SMAI CEMRACS, or by bank transfer to:

SMAI CEMRACS 2010,  
 Institut H. Poincaré  
 11, rue Pierre et Marie Curie  
 75231 Paris Cedex 05  
**RIB (France)**  
 30004-00042-00010009617-27  
 BNP Paribas Paris Jussieu

International bank account no.

FR76-3000-4000-4200-0100-0961-727

A copy of the bank transfer should be enclosed with the registration form. Please, notice that:

- Young researchers attending the Research Center must also attend to the Summer School.
- Young researchers coming for the whole period to work on a project can apply for a financial support. In any case, young researchers are invited to send a CV and a letter detailing their scientific experience and their motivation.



CEMRACS'12

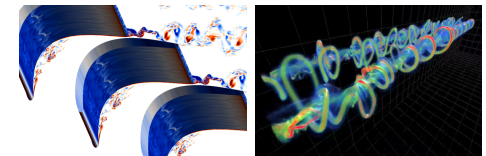
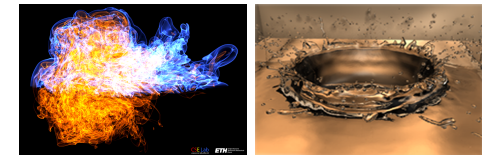
Centre d'Été de Mathématiques et de Recherche Avancée en Calcul Scientifique

Numerical Methods and Algorithms for High Performance Computing

CIRM, Marseille, France

July 16 - August 24, 2012

<http://smai.emath.fr/cemracs/cemracs12/>



Lectures (July 16 - July 20)

- |                         |                          |
|-------------------------|--------------------------|
| Linear Algebra          | Multigrid Methods        |
| Numerical Time Schemes  | Domain Decomposition     |
| Multiresolution         | Adaptive Mesh Refinement |
| Uncertainty Propagation |                          |

Research Session (July 23 - August 24)

- Main financial supports: CNRS, SMAI.
- The full list of industrial and academic partners will be on the Cemracs website.
- Junior Researchers Grants available.

Contact: [cemracs2012@math.cnrs.fr](mailto:cemracs2012@math.cnrs.fr)

## Presentation

The Summer Mathematical Research Center on Scientific Computing and its Applications (Cemracs) will host its seventeenth international session in post graduate courses and research in applied mathematics and scientific computing from July 16 to August 24, 2012.

This research center is primarily aimed at promoting newest achievements in applied mathematics and scientific computing while stimulating interdisciplinary interactions. The goal is to lead the research effort of scientists coming from various fields and involved either in academic research or in technology development in order to perform significant achievements in the derivation and/or the validation of original numerical techniques within the frame of applied problems of vivid interest. Cemracs'12 is the opportunity for mathematicians and computational scientists to address some of the challenges in computational science raised by emerging HPC platforms.

## Cemracs General Structure

Cemracs'12 will consist in two joint events: a summer school on numerical methods and algorithms for high performance computing (July 16 - July 20), an intensive five weeks long research session (July 23 - August 24). A one-hour talk will be given each day in the conference room. The remaining part of the day will be devoted to the research activity inside each project team.

## Summer School (July 16 - August 20, 2012)

The lectures will be given by

- Martin Gander (Université de Genève)
- Jean-Luc Guermond (Texas A&M University)
- Koen Hillewaert (CENAERO)
- Gianluca Iaccarino (Stanford University)
- Petros Koumoutsakos (ETH Zurich)

- Frédéric Nataf (Université Paris 6)
- Mario Ricchiuto (INRIA Bordeaux)
- Ulrich Ruede (University Erlangen-Nuremberg)

## Research Session (July 23 - August 24, 2012)

Every participant will work in a team on a project proposed by an industrial or an academic partner. Each team is composed of two young researchers assisted by one or more senior researchers. The commitment for the young researchers is to be present for the whole period of Cemracs.

The commitment for the senior researchers is to ensure the management of the project, including precise definition of the subject and supervision. Other visiting scientists, interested in the ongoing research, can be associated with the program for shorter periods.

## Call for Research Projects Proposal, Financial Support

This Cemracs is devoted to the study of numerical methods in high performance computing. The projects will give the opportunity to develop new mathematical methods on emerging HPC platforms.

**We invite academic and industrial partners to contact the organizing committee to submit projects:**

[cemracs2012@math.cnrs.fr](mailto:cemracs2012@math.cnrs.fr)

Financial support is required for the partners which propose a project in order to cover the local expenses of Junior researchers coming for the whole period of the Cemracs. Any other type of financial support is also welcome.

## Cemracs'12 Organizing Committee

- S. Descombes (Lab. J. Dieudonné - Nice)
- B. Dussoubs (IJL, Ecole des Mines de Nancy)
- S. Faure (LMO - Paris-Sud)
- L. Gouarin (LMO - Paris-Sud)
- V. Louvet (ICJ - Lyon 1)
- M. Massot (EM2C - ECP)
- V. Miele (LBBE - Lyon 1)

## Cemracs'12 Scientific Committee

- R. Abgrall (IMB & INRIA - Bordeaux)
- L. Giraud (INRIA - Bordeaux)
- P. Koumoutsakos (CSElab - Zürich)
- P. Lafitte (Lab. P. Painlevé - Lille 1)
- S. Lantéri (INRIA - Sophia Antipolis)
- J. Roman (LABRI & INRIA - Bordeaux)
- R. Teyssier (ITP - Zürich)

## Contacts

*email:*

[cemracs2012@math.cnrs.fr](mailto:cemracs2012@math.cnrs.fr)

*web site:*

<http://smail.emath.fr/cemracs/cemracs12/>

