

Accommodation

Suggested hotels:

Hotel Bologna (★★★)
Corso Vittorio Emanuele II, 60
Tel +39 011 5620193
Email: info@hotelbolognasrl.it

Hotel Italia (★★★)
Corso Stati Uniti, 9/Bis
Tel +39 011 5620402
Fax +39 011 5628778
Email: info@hotelitaliatorino.it

Best Western Hotel Piemontese (★★★)
Via Berthollet, 21
Tel +39 011 6698101
Fax +39 011 6690571
Email: info@hotelpiemontese.it

Location

Centro Polifunzionale Lingotto of Politecnico di Torino, Aula Magna
Via Nizza 230, 10126 Torino

Take the **Metro** to “**Lingotto**” from railway stations Porta Susa or Porta Nuova (15 min), then 5 min walk, see below.



Participation fees

The participation fees are € 120.00. They include the membership to the Italian Group of Fracture (IGF) and to the European Structural Integrity Society (ESIS) in 2012. In case the participant has already paid these membership fees in 2012, a reduced participation fee of € 90.00 will be requested. The participation is free for Professors, PhD students and Post-docs of the Department of Structural, Geotechnical and Building Engineering of Politecnico di Torino. In this case, the membership to IGF and ESIS will not be issued.

The payment can be made during the day of the workshop (cash or credit card), or in advance with a wire transfer to:

GRUPPO ITALIANO FRATTURA (IGF)
c/c n° 031000100940
EMILBANCA CREDITO COOPERATIVO
Via dell'Arcoveggio 56/22 – Bologna
IBAN: IT 02 L 07072 02408 031000100940
BIC/SWIFT: ICRAITRTS0

Organizing secretariat

Dr. Ing. Marco Paggi
Politecnico di Torino - DISEG
Corso Duca degli Abruzzi 24, 10129 Torino
Fax: +39-011-0904899
Email: marco.paggi@polito.it

<http://www.gruppofrattura.it>

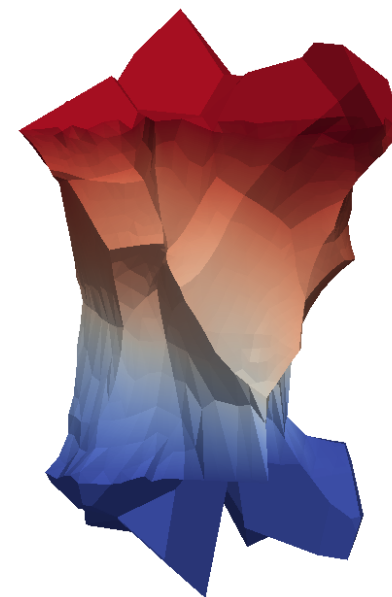
The cover image shows the ductile deformation of a polycrystal. This study was a part of the Vigoni Project “3D modelling of crack propagation in polycrystalline materials” between Politecnico di Torino and the Leibniz University Hannover supported by AIT, MIUR and DAAD.



GRUPPO
ITALIANO
FRATTURA
(IGF)



Virtual testing of materials and structures



Organizers

Marco Paggi and Alberto Carpinteri

Turin, October 8, 2012

Aims

Virtual testing of materials and structures is nowadays possible due to the significant progress in computational technologies. The methodology is very appealing from the industrial point of view, since the design of new structural components, their mechanical characterization and further optimization using numerical methods can significantly reduce the production costs.

In this general context, the structural integrity assessment and the prediction of the mechanical response of complex heterogeneous systems requires the developments of tailored numerical methods. The presence of very different time and length scales, as well as nonlinearities, require special solution strategies.

The Italian Group of Fracture (IGF), engaged in the research on structural integrity of materials and structures, organizes a workshop on this topic with the participation of Worldwide experts in the field of computational mechanics.

The large participation of PhD students and young researchers is the primary aim. After the conference, the participants will be invited to submit an article to *Frattura ed Integrità Strutturale*, the open-access journal of IGF, or to *Meccanica*, the International Journal of the Italian Association of Theoretical and Applied Mechanics, for a possible publication.

Patronage

Ateneo Italo Tedesco
<http://www.ateneoitaledesco.org>



Deutscher Akademischer Austausch Dienst
<http://www.daad.de>

DAAD

Gruppo Italiano di Meccanica Computazionale
<http://www.aimeta.it>

GIMC

Programme

Monday, October 8, 2012

- 9:00 **Registration of the participants**
- 9:30 **Opening address**
- 9:40 **Presentation of the new website of the International Congress on Fracture**
- 10:00 **On virtual testing of materials.** P. Wriggers
- 10:30 **On diagnostic structural analyses including fracture parameters identifications: a survey of some recent research results.** G. Maier, V. Buljak, G. Cocchetti, T. Garbowski, G. Novati
- 11:00 **Virtual testing of tumor response to therapies.** G. Sciumè, P. Decuzzi, B.A. Schrefler
- 11:30 **Modelli meccanici esatti di materiali viscoelastici frazionari.** M. Di Paola, F.P. Pinnola, M. Zingales
- 12:00 **Instability of elastic structures.** D. Bigoni, F. Bosi, F. Dal Corso, D. Misseroni, D. Zaccaria
- 12:30 **Lunch**
- 13:30 **Interface models for cyclic delamination mechanisms.** G. Borino, F. Parrinello
- 14:00 **Modeling issues of the FRP detachment phenomenon.** E. Sacco
- 14:30 **Mixed mode debonding models for composite layers.** G. Zavarise, L. De Lorenzis
- 15:00 **Damage progression and interaction in laminated and sandwich structures subjected to dynamic loadings.** R. Massabò
- 15:30 **Coffee break**
- 16:00 **Second-gradient computational homogenization of periodic materials.** A. Bacigalupo, L. Gambarotta
- 16:30 **Shape-memory alloys: some new 3D constitutive modeling directions.** F. Auricchio
- 17:00 **Simulation of localized damage in curved shells.** U. Perego, M. Pagani
- 17:30 **Fracture processes in microsystems: modelling, simulation and experiments.** G. Cocchetti, F. Confalonieri, A. Corigliano, A. Ghisi, S. Mariani
- 18:00 **Closing address**



Virtual testing of materials and structures Turin, October 8, 2012

For organizational purposes, please send this form to marco.paggi@polito.it by September 7, 2012:

Surname

Name

Affiliation

Address

E-mail

Tel

Fax



I would like to participate to the event

Date

Signature

The collected data will be used solely for the organization of the workshop, according to D.L. 196/2003 and subsequent modifications and integrations.