Accommodation

Hotel Salles **Malaga Centro** (★★★★)
C/Marmoles, 6
29007 Malaga (Spain)

To book the room, please email
jrecmc@salleshotels.com
or call 0034 952070216
Please book the room by 25th March and reference "Crack-tip characterisation congress" when booking your room

Connections to the Hotel from Malaga Airport (AGP):

- Train Cercanias direction Malaga-Centro Alameda, last stop (Malaga-Centro Alameda) 2€. Trains every 20 min, journey time 12 min. There's a 5 min walk from the train stop to the hotel.

- Bus "Linea A" from the airport to Malaga Centro 2€. Stop by "El Corte Ingles". There's a 5 min walk from the bus stop to the hotel.

- Taxi from the airport to the hotel (see address above) 20-25€.

Registration

A registration fee of 100€ will be charged to each delegate attending the workshop. Please register by 25 March 2013. Instructions on registration process can be found on website:
www.gruppofrattura.it/sito/en/workshop-2013-malaga

Deadlines

Camera-ready paper (4-8 pages): **1 March** 2013
Workshop registration: **25 March** 2013
In order to secure a room at the workshop hotel, reservations have to be made before **25 March** 2013.

Workshop Venue

The city of Malaga is located in a privileged enclave at the very South of Spain (Costa del Sol) in the Andalucía region. The city combines outstanding environmental and geographical factors. While the maritime influence is clearly visible in the structure of the city, the city also has a well-preserved Arabic district and a wide range of cultural activities. In addition, its 320 sunny days a year make it an ideal spot for visiting during any season, with April being a particularly fine time.
Malaga airport (AGP) is well connected to most important cities through Europe and is very well linked to the city centre (15 min ride by train, bus or taxi).

Support

GRUPPO ITALIANO FRATTURA (IGF)

GEF Grupo Español de Fractura
Sociedad Española de Integridad Estructural

www.gruppofrattura.it
www.gef.es

UNIVERSITY OF MALAGA (SPAIN)

Second IJFatigue & FFEMS Joint Workshop

Characterisation of Crack Tip Stress Fields

Malaga (Spain)
www.malagaturismo.com
15-17 April 2013

Author Information

Short conference papers (4-8 pages) will also be published in the proceedings through a Special Issue of the International Journal of the Italian Group of Fracture. The proceedings of the conference will be indexed in Scopus. Please prepare your manuscript using the template "TEMPLATE.doc" that can be downloaded from the website:
www.gruppofrattura.it/sito/en/workshop-2013-malaga

Workshop Chairmen

M. N. James - *University of Plymouth, UK*
L. Susmel - *University of Sheffield, Italy*
P. Lopez-Crespo – *University of Malaga, Spain*
A. Gonzalez-Herrera – *Univ. of Malaga, Spain*
B. Moreno-Morales – *Univ. of Malaga, Spain*
F. Iacoviello - *University of Cassino, Italy*

Local Organising Committee

P. Lopez-Crespo
J. Zapatero – GEF Vice-President
B. Moreno-Morales
A. Gonzalez-Herrera
D. Camas-Peña

Workshop Secretariat

c/o **Pablo Lopez-Crespo**
University of Malaga
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Background

Single parameter characterisation of the crack/notch tip field using fracture mechanics parameters like K, J or CTOD has been extremely powerful in advancing predictive technologies for critical or sub-critical crack growth. It has also become clear over the last 40 years that single parameter approaches have limitations particularly in dealing with crack growth phenomena arising from crack tip shielding, often resulting from the plastic enclave surrounding a crack. Influences of this enclave on the crack tip stress field ahead of the crack are maximised during cyclic loading. In the case of a parameter like stress intensity factor, K, which characterises the crack tip field via an elastic approximation, it is not surprising that any set of plasticity-induced circumstances which perturb the size of the plastic enclave and its associated strain field lead to predictive difficulties. Over the last 30 years, notable areas of activity related to such difficulties include short cracks, plasticity-induced closure, variable amplitude and multiaxial loading and notch effects.

Thus an increasing number of authors and research groups, particularly in Europe, are working on the topic of characterisation of crack tip stresses using more than one fracture mechanics parameter. Attention has been directed, for example, towards incorporating the T-stress into life prediction methods. The T-stress is the second term in a Williams-type expansion of the crack tip stresses and it affects the extent and shape of crack tip plasticity. It would therefore be expected to be influential in plasticity-related crack growth phenomena and a number of publications have demonstrated this to be true. The situation is further complicated where a crack experiences multiaxial loading and Modes II and III fracture mechanics parameters are also necessary. Other research groups have focussed attention on incorporating additional elastic fracture mechanics parameters into crack/notch tip characterisation, which describe the effects of an Eshelby-type 'plastic inclusion' on an elastic stress field.

The first highly successful workshop on this topic was held in Forni di Sopra, Udine, Italy in March 2011 and the proceedings were published as a joint-Special Issue of IJFatigue and FFEMS.

The organisers of this second workshop believe that it offers a unique opportunity for invited scientists and engineers from the fatigue and fracture research community to present and exchange new data and cutting edge ideas related to the characterisation of crack/notch tip stress fields in an informal, interactive format at an excellent venue in a beautifully scenic area.

Aim

The proceedings of the 1st IJFatigue & FFEMS Joint Workshop on Characterisation of Crack-tip Fields have now been published as a joint-Special Issue (Guest Editorial doi:10.1016/j.ijfatigue.2012.08.001 and doi:10.1111/ffe.12004).

The 2nd IJFatigue & FFEMS Joint Workshop on Characterisation of Crack-tip Fields will be held in Malaga (Spain) from **15 to 17 April 2013**. This meeting will have a structure similar to the previous one, intended to provide ample time for discussion and free exchange of ideas in this important area for the field of fatigue and fracture.

As for the previous conference, we are engaging in discussions with Elsevier and Wiley to arrange joint publication of Special Issues of the International Journal of Fatigue and Fatigue and Fracture of Engineering Materials and Structures. Delegates will have the opportunity to incorporate the ideas from the conference into their presentations and produce extended papers for publication in these Special Issues.

Outline of conference organisation

A prime objective of the workshop is to promote discussion amongst researchers and the available time will be equally split between presentations and discussion. Rapporteurs will summarise key points for a more extensive discussion at the end of each day. Introductory keynote scene setting presentations are planned at beginning of each session.