A Symposium on

FRACTURE BEHAVIOUR AND FATIGUE DAMAGE OF STRUCTURES: THEORY AND EXPERIMENTS

Organizer

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Affiliated with

IRF2018
6TH INTERNATIONAL CONFERENCE INTEGRITY - RELIABILITY - FAILURE
Lisbon, Portugal
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(http://paginas.fe.up.pt/~irf/IRF2018/)

This important symposium is intended to bring together delegates from around the world to show case their recent efforts and discuss how to characterize, predict, and validate experimentally the fracture and the fatigue damage of structural materials. Metallic, composites and polymeric materials are considered. The behaviour at varied length scales will also be welcome in this symposium.

This symposium will cover a number of sessions in the form of oral presentations or posters that will facilitate sufficient time for a thorough technical presentation and follow-up discussions of the cutting edge issues in this important field of fatigue and fracture of engineering components.

Please join us to advance the knowledge and the understanding of the phenomena governing the fatigue and the fracture behaviour of engineering structures by employing the varied analytical, computational and experimental techniques.

Symposium topics include (but not limited to):

- Fracture Behaviour of Solids at Varied Length Scales
- Size Effects and Length Scales in Fracture and Fatigue of Metals
- Fatigue Fracture Behaviour of Intelligent Materials (SMAs, Piezoelectric, Ferroelectric)
- Fracture and Fatigue Damage of Advanced Nanocomposites
- Fracture and Fatigue Damage of Advanced Composites and Metals
- Characterization of Mixed-Mode Fracture Analysis
- Mechanisms for Fracture and Fatigue-Crack Propagation
- Tribological Effects, Surface Damage and Fretting Fatigue
• Random and Variable Amplitude Loading in Fatigue
• Thermomechanical Fatigue, Corrosion-Fatigue and Creep-Fatigue Interaction
• Crack Closure Effects and Techniques in Crack Healing
• Effect of Surface Treatments on Fracture and Fatigue (Heat treatments, Shot-Peening, Laser Peening, coatings, welding)
• Failure and Fracture of Biomaterials and Implants (Finger and dental implants, hip replacements)
• Advanced Crack Monitoring Techniques
• Advanced Techniques in Fracture and Fatigue Testing
• Case studies and Historical Perspective of Major Catastrophes

Extended abstracts of two full pages should be written in the same format as the full papers for the USB-card (no limitation in length for these):

Paper Size: A4, single column
Margins: Top page 3,0 cm; Bottom 2,5 cm, Left & Right 2,5 cm
Font and line spacing: Times New Roman; single space
First 3 lines: Should be left blank, size 10, reserved for the editors
Title: Begins at the 4th line, capital letters, size 14, bold, left alignment
Authors Names: Size 10, left alignment, two lines interval from title above
Authors affiliation: Size 10, left alignment, two lines interval from text below
Main Text: Size 12, full justification, 6 pt space after paragraph, no indentation
Headings: Capital letters, size 12, bold, one line interval from text above
Legends (Figs & Tables): Size 10, one line interval from text above and below
References: References to cited literature should be identified in the text with author(s) name(s) and year of publication (ex: Mascarenhas, 1997). Full citations should be grouped at the end of the paper and in alphabetical order of first author’s name. Always give inclusive page numbers for references to journal articles and a page range for books. Each reference must be cited in the text.

A sample abstract is available for download at:


which can also be used as template.

The Extended Abstracts are due by 15 JANUARY 2018, and those accepted will appear in a book which will be made available to delegates of IRF2018 during the event. Full papers will also be compiled in a USB-card and improved versions of selected papers will be considered for publication in indexed International Journals on the conference main topics.

For additional information, please contact one of the following:

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