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Financial Support

Organisers have a limited number of EC-funded scholarships for early-stage researchers to participate in the Special Session on Parametric Resonance, covering the Conference Fee. Applications, including an abstract and a current CV, should be forwarded to the Secretariat.

Important Dates

Abstract due: 15 December 2012

Notification: 15 January 2013

Paper due: 15 March 2013

Early registration: 30 March 2013

Final submission: 15 May 2013

Final registration: 5 June 2013

Local Organising Committee

Dr A. Abdel-Wahab

Dr E. Demirci

Dr A. Harland

Mr S. Li

Mr V. Phadnis

Dr A. Roy

Prof. V.V. Silberschmidt (Chair)

Mrs M.V. Tourichtcheva

Mr A. Zahedi



Organization

Secretariat

Mrs M.V. Tourichtcheva

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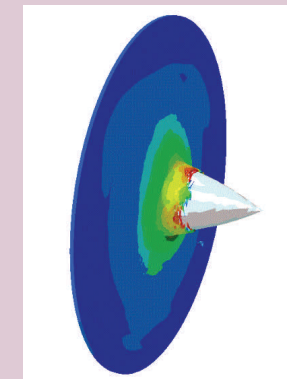


International Symposium on Dynamic Deformation and Fracture of Advanced Materials



D2FAM 2013

First Announcement



<http://D2FAM.lboro.ac.uk>

Sponsored by



**Loughborough, UK
9–11 September 2013**



Aim and Scope

The aim of this Symposium is to bring together specialists in mechanics of materials, applied mathematics, physics, continuum mechanics, materials science as well as various areas of engineering to discuss advances in experimental and theoretical analysis, and numerical simulations of dynamic mechanical phenomena.

The topics of the Symposium include, but are not limited to, the following:

- high-strain-rate loading and deformation;
- dynamic fracture;
- impact and blast loading;
- high-speed penetration;
- impact fatigue;
- damping properties of advanced materials;
- thermomechanics of dynamic loading;
- stress waves in microstructured materials;
- simulation of failure mechanisms and damage accumulation processes in materials under dynamic loading;
- response of components and structures to harsh environment.

The materials of interest range from traditional ones such as metals, alloys, ceramics, polymers and composites to advanced and emerging materials as well as bio-materials and materials for sports applications.

Abstract

Abstracts (1 page, 1.5-spaced) are invited in e-form (as a docx file) before **15 December 2012**. They should contain the title of the presentation, full names and addresses of the authors, objectives of the study, employed methods, and the most significant results. Copies of abstracts of all the accepted papers will be available in booklet form on the first day of the Symposium.

Special Session “Parametric Resonance, Vibro-impact and Related Phenomena”

The session will cover a range of specific topics directly related to the FP7 IAPP project PARM-2: “VIBRO-IMPACT MACHINES BASED ON PARAMETRIC RESONANCE: Concepts, mathematical modelling, experimental verification and implementation.”

Its topics include, but are not limited to:

- PR excitation, stabilization, control and applications;
- multiple degrees of freedom of PR-excited systems;
- basic principles of PR-based macro and micro tools;
- design and technological aspects of PR based-machines;
- vibro-assisted machining;
- fatigue under high-amplitude vibro-impact conditions and corresponding optimal design;
- localisation near defects in dynamic response of elastic lattices and structures;
- dispersive waves and dynamic fracture in non-uniform lattice systems;
- thermally induced surface-breaking cracks and thermal striping in structured solids.

Venue

The Symposium will be held on the campus of Loughborough University. Loughborough is a university town situated in the very heart of England next to cities of Nottingham and Leicester. It is conveniently located within easy access from London (1 hour 20 min by train) and next to the international Nottingham East Midlands Airport (EMA) (7 miles) that provides budget flights to many European destinations. Other nearby airports are in Birmingham and Luton (about 1 hour by train from each). Additional information on the location can be found on

the web page www.lboro.ac.uk/about/findus.html.

The campus is easily reachable from the Loughborough town centre (10 min by bus or 30 min by foot) and Loughborough Train Station (bus *Sprinter* or taxi).

Publications

The peer-reviewed papers presented at this Symposium will be published in a Special Issue of the Open Access *Journal of Physics: Conference Series* (JPCS), which is part of IOP Conference Series. All papers published in IOP Conference Series will be free to download.

Registration Fee

All participants of the Symposium are required to register and to pay the registration fee. The details of the registration and payment will be included into our Second Announcement.

Early Registration Fee (paid before 30 March 2013):

Regular participants: GBP 330.00

Students: GBP 220.00

The Registration Fee covers admission to sessions, coffee breaks, lunches, social programme (Student Fee does not cover the Symposium Dinner) and preprints of the abstracts.

Secretariat

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