HPSM/OPTI 2018

The 2018 International Conference on High Performance and Optimum Design of Structures and Materials

11 – 13 July 2018
Ljubljana, Slovenia

Organised by
University of Maribor, Slovenia
Wessex Institute, UK
Vrije Universiteit Brussel, Belgium
University of A Coruña, Spain

Sponsored by
WIT Transactions on the Built Environment
International Journal of Computational Methods and Experimental Measurements

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The conference addresses issues involving advanced types of structures, particularly those based on new concepts or new materials and their system design. Contributions will highlight the latest development in design, optimisation, manufacturing and experimentation in those areas. The meeting also aims to search for higher performance sustainable materials.

Most high performance structures require the development of a generation of new materials, which can more easily resist a range of external stimuli or react in a non-conventional manner. Particular emphasis will be placed on intelligent structures and materials as well as the application of computational methods for their modelling, control and management.

The conference also addresses the topic of design optimisation. Contributions on numerical methods and different optimisation techniques are also welcome, as well as papers on new software. Optimisation problems of interest to the meeting involve those related to size, shape and topology of structures and materials. Optimisation techniques have much to offer to those involved in the design of new industrial products.

The development of new algorithms and the appearance of powerful commercial computer codes with easy to use graphical interfaces has created a fertile field for the incorporation of optimisation in the design process in all engineering disciplines.

This scientific event is a new edition of the High Performance Design of Structures and Materials conference and follows the success of a number of meetings on structures and materials and on optimum design that originated in Southampton as long ago as 1989. As the meetings evolved they gave rise to the current series, which started in Seville in 2002, and followed by Ancona in 2004, Ostend in 2006, the Algarve in 2008, Tallinn in 2010, the New Forest, home of the Wessex Institute in 2012, Ostend in 2014 and Siena in 2016.

The meeting will provide a friendly and useful forum for the interchange of ideas and interaction amongst researchers, designers and scholars in the community to share advances in High Performance and Optimum Design of Structures and Materials.

Conference Chairmen
S Kravanja
University of Maribor, Slovenia

W P De Wilde
Vrije Universiteit Brussel, Belgium

S Hernandez
University of A Coruña, Spain

C A Brebbia
Wessex Institute, UK

International Scientific Advisory Committee
O T Gudmestad
University of Stavanger, Norway

H Sakamoto
Kumamoto University, Japan

V Yepes
Politechnic University of Valencia, Spain

The use of novel materials and new structural concepts nowadays is not restricted to highly technical areas like aerospace, aeronautical applications or the automotive industry, but affects all engineering fields including those such as civil engineering and architecture.
Benefits of Attending

Publication of Papers

Reviews
Abstracts and papers are reviewed by members of the International Scientific Advisory Committee and other experts.

Open Access
WIT Press is an advocate of Open Access which offers maximum dissemination of your work. All WIT Transactions and Journal papers can be downloaded free of charge from the WIT elibrary (www.witpress.com/elibrary).

Indexing and Archiving
Papers presented at Wessex Institute conferences are referenced by CrossRef and have appeared in notable reviews and databases. Papers are submitted to various indexing services such as Web of Science, Google Scholar, Index Copernicus and Scopus. All conference books are listed in the British Library and American Library of Congress.

Conference Proceedings
At registration delegates will be given copies of the papers presented at the Conference on a USB Flash drive. Following the Conference, delegates will receive an electronic copy of the final publication in which their paper has been published.

Digital Archive
All conference papers are archived online in the WIT eLibrary (www.witpress.com/elibrary) where they are permanently and freely available to the international scientific community.

Networking
Participants can present their research and interact with experts from around the world, as part of a unique community.

Reduced Fee for PhD Students
The Wessex Institute believes in the importance of encouraging PhD students to present and publish innovative research at its conferences. As a result, the Institute offers PhD students a much reduced conference fee.

Conference Topics
The following list covers the topics to be presented at the meeting. Papers on other subjects related to the objectives of the conference are also welcome.

Composite materials
Material characterisation
Experiments and numerical analysis
Natural fibre composites
Nanocomposites
Green composites
Composites for automotive applications
Transformable structures
Environmentally friendly and sustainable structures
Structural optimisation
Design optimisation under uncertainties
Non deterministic approaches
Evolutionary methods in optimisation
Aerospace structures
Biomechanics application
Structures under extreme loading
Surface modification
Lightweight structures
Design for sustainability
Design for durability
Lifecycle assessment/analysis
Structural reliability
Maintenance
Smart materials and structures
Submission Information

Abstracts of no more than 300 words should be submitted as soon as possible.

Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. Final acceptance will be based on the full-length paper, which if accepted for publication must be presented at the conference.

The language of the conference will be English.

Online submission:
www.witconferences.com/hpsmopti2018

Conference Secretariat
Irene Moreno Millan
imoreno@wessex.ac.uk

Wessex Institute
Ashurst Lodge, Ashurst
Southampton, SO40 7AA, UK
Tel: +44 (0) 238 029 3223
Fax: +44 (0) 238 029 2853

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