

HPSM/OPTI 2018

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Call for Papers



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

11 – 13 July 2018
Ljubljana, Slovenia

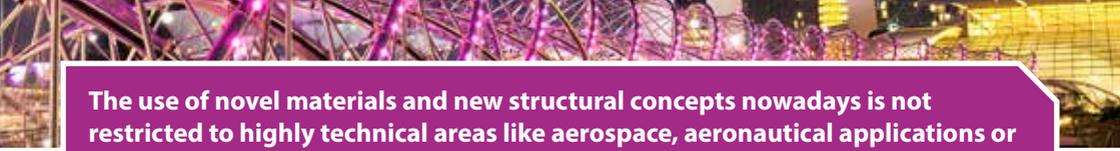
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International Journal of Computational
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The use of novel materials and new structural concepts nowadays is not restricted to highly technical areas like aerospace, aeronautical applications or the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

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

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University of A Coruña, Spain

C A Brebbia

Wessex Institute, UK

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Czech Technical University, Czech Republic

Benefits of Attending

Publication of Papers

Papers presented at HPSM/OPTI 2018 will be published by WIT Press in a Volume of WIT Transactions. Selected papers will appear in an Issue of the International Journal of Computational Methods and Experimental Measurements instead.

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



history, situated on a hill above the city, offers some of the most beautiful views of Ljubljana.

This diverse city hosts over 10,000 cultural events each year, including 10 international festivals from music and theatre to fine art.

Conference Venue

The conference will take place at Hotel Slon – Elephant. The hotel is situated in the very heart of Ljubljana city centre. It is only a few steps away from the old city core, Ljubljana castle and all the main city sights.

This modern 4-star superior hotel has 170 comfortable and well-appointed rooms with all modern facilities and amenities. Deluxe rooms and suites offer luxurious accommodation. Its restaurant, Slon 1552, offers traditional Slovenian dishes refined with a hint of the Mediterranean.



Location

As the capital of Slovenia, the cosmopolitan city of Ljubljana is a combination of two thousand years of heritage and today's youthful enthusiasm. The active 50,000 student population means the city museums, hotels and restaurants are among the best in the country.

Ljubljana's rich culture, displays buildings, bridges and road systems from its Roman beginnings through the Renaissance, Baroque and Art Nouveau periods. Its most iconic building, Ljubljana Castle, is Ljubljana's main attraction. The castle, with its 900 years of

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

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For more information visit: www.witconferences.com/hpsmopti2018