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## Conference Sponsors



## Scientific Program

The Scientific Program of the conference will be daily arranged around *Keynote Plenary Lectures* by distinguished scientists, and parallel sessions for oral paper presentations. Paper presentations in the form of Posters will also be possible, and facilities for that purpose will be available during the days of the **M2D2017** conference.

## Social Program

In parallel with the Technical and Scientific Program, a full range of social activities will be offered to Delegates and Accompanying Persons during all days of the Conference. Most of these will be organised by a competent local travel agency to be associated with the **M2D2017** conference.

## Registration

All attendees, including invited speakers, are strongly advised to register in advance of the Conference. The registration fees are as follows:

Registration Fee	Prior to 31 JAN 2017	After 31 JAN 2017
Full Delegate	750,00 Euro	950,00 Euro
Student Delegate	600,00 Euro	750,00 Euro
Accompanying Person	300,00 Euro	350,00 Euro

All registered delegates are entitled to one copy of the book of abstracts, CD-ROM with full-papers, present a maximum of two papers (one oral and one poster), attend all technical sessions, early-bird reception and welcome dinner, refreshments, lunches, conference banquet and privileged access to all initiatives of the social program. Accompanying Persons are entitled to early-bird reception and welcome dinner, banquet and privileged access to all initiatives of the social program.

## Further Information

For further information, please see the conference web site, or contact the Organising Committee at the following addresses:

**Prof. J.F. Silva Gomes**

FEUP/DEMec

E-mail: [sg@fe.up.pt](mailto:sg@fe.up.pt)

or

**Prof. Shaker A. Meguid**

MADL/U.Toronto

E-mail: [meguid@mie.utoronto.ca](mailto:meguid@mie.utoronto.ca)



# 1<sup>ST</sup> ANNOUNCEMENT AND CALL FOR PAPERS

This is the First Announcement and Call-for-Papers for the **7<sup>th</sup> International Conference on Mechanics and Materials in Design**, to take place in Albufeira/Algarve (Portugal) from 11 to 15 June 2017. The deadline for Abstract Submission is 15 December 2016. Full information about the conference can be found in the **M2D2017** web site, at the following address:

<http://paginas.fe.up.pt/clme/M2D2017/>

## Institutional Sponsors

*The conference is jointly sponsored by*  
Faculty of Engineering, University of Porto  
MADL-University of Toronto  
ISE/DEM-University of Algarve

## Relevant Dates

Submission of Abstracts	15 December, 2016
Notification of Acceptance	07 January, 2017
Deadline for Early Registration	31 January, 2017
Submission of Full Papers	15 March, 2017
Conference	11-15 June, 2017

## Conference Co-Chairs

**Prof. J.F. Silva Gomes**

Faculty of Engineering, University of Porto, Portugal

**Prof. Shaker A. Meguid**

MADL, University of Toronto, Canada

## Organising Committee

(Local Members)

Carlos C. António (U.Porto); Carlos Nunes (U.Algarve);  
Catarina Castro (U.Porto); Clito F. Afonso (U.Porto); José M. Cirne  
(U.Coimbra); Mário A.P. Vaz (U.Porto); Paulo Piloto (I.P.Bragança)

## Conference Venue

The conference will be held in the beautiful city of Albufeira in Algarve (Portugal), at the magnificent Hotel Vidamar Resort Algarve\*\*\*\*, which is a very convenient hotel, well equipped for conferences in terms of facilities, transportation and proximity to other hotels.

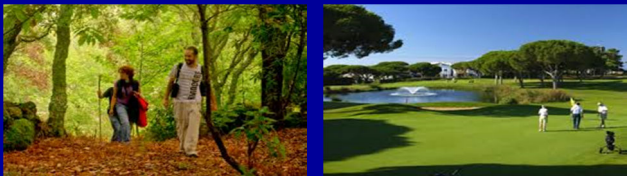
It was in Algarve that, in the 15th century, the Portuguese set off on the epic journey that led them to discover other peoples and cultures... and it is in the Algarve that we cheerfully welcome many of our visitors. Even the climate is mild and sunny all year round!



There's no shortage of high quality beaches either. Sandy stretches as far as the eye can see, framed by golden cliffs, virtually deserted islands marking the boundary between Ria Formosa and the sea, and small coves sheltered by the rocks. The ocean, in every shade of blue and mostly calm and warm, invites you for long swims and to indulge in water sports.



And there are also the mountains, where people live in harmony with nature and maintain traditions that they love to share. And the cities. Silves preserves traces of its Arab past and Lagos from the time of the Discoveries. More cosmopolitan Portimão and Albufeira are bustling towns by night and day. Tavira is a showcase for traditional architecture and Faro, the gateway to the region, deserves a long stop to discover its beautiful historic centre.



At the table, you will be delighted with the fresh fish and seafood, either grilled or in a casserole. These are divine flavours which you can enjoy on a simple beach terrace or in the most refined Michelin-starred restaurants, where chefs turn out new versions of traditional cuisine. They are further experiences not to be missed on a visit to the region.

## Objectives

**M2D2017** is the seventh international gathering of scientists and engineers interested in the fields of mechanics, engineering design, advanced materials, energy harvesting, reliability, quality and safety engineering, and is planned for June 11-15, 2017 in Albufeira/Algarve, Portugal. Contributions in the fields of Nanotechnologies, Nanomaterials, Biomechanics and Experimental and Computational Mechanics applied to Mechanical, Aeronautical, Space, Civil, Automotive, Biomedical, Environmental, and Nuclear Engineering will be welcome. The goal is to enable engineers, researchers and scientists to exchange ideas on the following and derivative topics:

### Main Topics

- **Computational Mechanics:** FEM, BEM and Hybrid Methods, Analysis of Structural Components, Optimum Design Techniques, Metal Forming and Metal Cutting, Dynamics and Vibration, Dynamic Loading of Structures, Reliability Assessment, Case Studies
- **Experimental Mechanics:** Condition Monitoring, Destructive and Nondestructive Testing, Optical Techniques, Damage Mechanics and Assessment, Prototyping and Full-Scale Testing, Vibration Monitoring, Residual Stresses, Case Studies.
- **Fatigue and Fracture Mechanics:** Fatigue, Corrosion-Fatigue, Stress Corrosion Cracking, Fatigue Creep Interaction, Environmentally Assisted Failures, Brittle Fracture, Buckling, Impact Failure, Case Studies.
- **Composite and Advanced Materials:** Fibres, Matrices and Interfaces, Polymer/Ceramic/Carbon/Metal Composites, Multi-functional Composites, Smart Structures and Materials, Processing/Fabrication/Recycling, Durability/Damage/Fracture, Health Monitoring and Repairability, Case Studies.
- **Nanotechnologies and Nanomaterials:** NEMS and MEMS Technologies, Nanocomposites, Nanodevices, Diagnostics and Control, Nanosensors, Molecular Devices, Applications of Nanocomposites in Industry, Case Studies.
- **Tribology and Surface Engineering:** Lubrication, lubricants and additives, Surface coatings and treatments, Gears and bearings, Micropitting, pitting, scuffing and wear, Surface integrity, Clutches, Adhesive bonding, Case Studies.
- **Mechanical Design and Prototyping:** Mechanical Design, Product Development, Additive Manufacturing, Prototyping, Design for Manufacturing, Eco-design, Conversion Technologies, Case Studies.

## Topics (continued)

- **Biomechanical Applications:** Mechanics and Design of Protheses, Biomaterials and Biocompatibility, Stress Monitoring, Dental and Orthopaedic Biomechanics, Sports and Rehabilitation Biomechanics, Biofluid Mechanics, Medical Devices, Case Studies.
- **Civil Engineering Applications:** Structural Analysis, Structural Integrity, Experimental Tests & Structural Monitoring, Experimentation in Geoseismology, Concrete and Composite Structures, Metallic Structures, Structural Rehabilitation, Case Studies
- **Impact and Crashworthiness:** Testing Techniques, Measurement in Dynamics, Earthquake Engineering, Crashworthiness, Ballistic Studies, Energetic Materials, Impact Behaviour of Materials, Case Studies.
- **Energy and Thermo-Fluid Systems:** Energy Systems, Thermal Barrier Coatings, Heat And Mass Transfer, Experimental Fluid Dynamics, Solid-Fluid Interactions, Interfacial Dynamics, Large Scale Eddy and Turbulence Analysis, Case Studies.
- **Industrial Engineering and Management:** Systems Engineering, Manufacturing Engineering, Safety Engineering, Sustainable Technologies and Processes, Risk Assessment, Product Reliability, Operations Management, Case Studies.

### Thematic Symposia

A number of thematic symposia will be organized under the auspices of **M2D2017** - 7<sup>th</sup> International Conference on *Mechanics and Materials in Design*. Interested authors should contact the coordinators directly.

Individuals interested in running a Symposium on any or derivatives of the main conference topics should inform the conference chairs of their intention as soon as possible. Upon approval, the symposium organiser will be requested to submit a summary of his/her plans with regards to the title of symposium, number of sessions required (5 papers per session), names of potential authors and any other special requirements.

### Technical Exhibition

**M2D2017** will provide facilities for a technical exhibition on equipments, software and services related to *Mechanics and Materials in Design* during the whole period of the conference. Companies and individuals interested in displaying software, apparatus or any other kind of material at the technical exhibition should inform the conference chairs of their intention as soon as possible.