

Scientific Program

The Scientific Program of the conference will be daily arranged around two *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 **M2D'2015** 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 **M2D'2015** 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 2015	After 31 JAN 2015
Full Delegate	650,00 Euro*	850,00 Euro*
Student Delegate	500,00 Euro*	650,00 Euro*
Accompanying Person	250,00 Euro	350,00 Euro
Publication Fee**	450,00 Euro**	550,00 Euro**
Exhibitor	2500,00 Euro	3500,00 Euro

*Maximum two papers. Extra papers may be considered for publication, subjected to a special Publication Fee of 350,00€/extra paper.

**This fee applies only for authors that are not planning to attend the conference.

All registered delegates (full and students) are entitled to one copy of the book of abstracts, CD-ROM with full-papers, publication and presentation up to a maximum of two papers (one oral and one poster), attend all technical sessions, early-bird and welcome receptions, refreshments, lunches, conference banquet and access to all initiatives of the social program.

Accompanying Persons are entitled to the early-bird and welcome receptions, banquet and access to all initiatives of the social program.

Publication Fee entitles the registered author to have his papers (maximum two) published in the conference proceedings, and to receive a copy of the conference proceedings (book of abstracts + CD-ROM with full papers).

Exhibitors are entitled to a 6m2 booth equipped with a small table and two chairs, access to electricity, registration of one representative as full Delegate, and name in the list of the conference sponsors.

Further Information

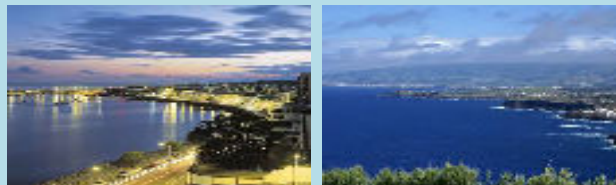
For further information, please see the conference web site, or contact the Organising Committee at the following addresses:

Prof. J.F. Silva Gomes
FEUP/U.Porto
Email: sg@fe.up.pt

Prof. Shaker A. Meguid
AMDL/U.Toronto
Email: meguid@mie.utoronto.ca

Conference Venue

The conference will be held in the beautiful city of Ponta Delgada in Azores (Portugal), at one of the best hotels in the city (the name will be announced shortly...), very convenient and well equipped for conferences in terms of facilities, transportation and proximity to other hotels.



Situated in the middle of the Atlantic, off the coast of Europe, the nine islands of the Azores is home to a variety of landscapes and spectacular volcanic scenery. SÃO MIGUEL is the largest of the nine islands, known for an enchanting natural wonder, the Sete Cidades twin lakes. Another curiosity in the island is the food prepared in hot volcanic rock. A favorite dish is "Cozido das Furnas", in which meat and vegetables are stewed in pits in the heat of the volcanic earth.



Ponta Delgada, in S. Miguel, is the capital of the entire archipelago of Azores and the tourist heart of the island. To the north of the city gates stands the Church of São Sebastião, founded in 1533 with a fine Manueline portal intricately carved in limestone. The sacristy is decorated with tile panels and 17th century furniture.



In the center of the island is a majestically beautiful spot, Lagoa do Fogo, a crater lake formed by a volcanic eruption in the 16th century. An activity that takes place in São Miguel that doesn't happen anywhere else in Europe is tea production, and you may visit the Gorreana Tea Factory and Plantation.



6th International Conference on
MECHANICS AND MATERIALS IN DESIGN
P. Delgada/Azores, 26-30 July 2015

FINAL ANNOUNCEMENT CALL FOR PAPERS

This is the Second Announcement and Call-for-Papers for the **6th International Conference on Mechanics and Materials in Design**, to take place in P. Delgada/Azores (Portugal) from 26 to 30 July 2015. The deadline for Abstract Submission is 15 December 2014. Full information about the conference can be found in the **M2D'2015** web site, at the following address:

<http://paginas.fe.up.pt/clme/m2d2015/>

Institutional Sponsors

Faculty of Engineering, University of Porto
MADL-University of Toronto
DCDT-University of Azores

Relevant Dates

Submission of Abstracts	15 December, 2014
Notification of Acceptance	07 January, 2015
Deadline for Early Registration	31 January, 2015
Submission of Full Papers	15 March, 2015
Conference	26-30 July, 2015

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); Catarina Castro (FEUP); Clito Afonso (U.Porto); José M. Cirne (U.Coimbra); M. João Barros (U.Azores); Mário Vaz (U.Porto); Paulo Piloto (IPB); Pedro Moreira (FEUP/INEGI).

Keynote Speakers

Professor Shaker A. Meguid (U. Toronto, Canada)
Professor Noritsugu Umehara (U. Nagoya, Japan)
Professor Ng Teng Yong (Nanyang T.U., Singapore)
Professor Peter Hess (U. Heidelberg, Germany)

International Scientific Committee

Aben, H. (Estonia), Abreu, M.J. (Portugal), Adali, S. (S. Africa), Afonso, C.F. (Portugal), Aleksandrova, N. (Portugal), Alexopoulos, N. (Greece), Alves, A. (Portugal), António, C.C. (Portugal), Banks-Sills, L. (Israel), Baptista, J.S. (Portugal), Barros, R.C. (Portugal), Bathe, K.J. (USA), Botsis, J. (Switzerland), Bremand, F. (France), Caetano, E. (Portugal), Camanho, P. (Portugal), Campos, J.R. (Portugal), Castro, C.F. (Portugal), Castro, P.T.de (Portugal), Catarino, A. (Portugal), Cavalcante, M. (Brazil), Chen, T. (Taiwan), Chenot, J-L (France), Cirne, J. (Portugal), Correia, A. (Portugal), Costa, Luísa (Portugal), Crococolo, D. (Italy), Cunha, A. (Portugal), Datta, S. (USA), Degrieck, J. (Belgium), Dias, G. (Portugal), Dietrich, L. (Poland), Diogo, M.T. (Portugal), Dourado, N. (Portugal), Eberhardsteiner, J. (Austria), Esteves, J.L. (Portugal), Fangueiro, R. (Portugal), Fernandes, A.A. (Portugal), Ferreira, D. (Portugal), Ferreira, J.G. (Portugal), Fiúza, A. (Portugal), Fonseca E. (Portugal), Gdoutos, E. (Greece), Geraldés, M.J. (Portugal), Guedes, R.M. (Portugal), Hejrum, Du (Singapore), Igartua, A. (Spain), Ignaszak, Z. (Poland), Iliescu, N. (Romania), Jones, N. (UK), Jorge, R.N. (Portugal), Kahlen, F-J (S. Africa), Klein, W. (Germany), Kourkoulis, S. (Greece), Laermann, K. (Germany), Langseth, M. (Norway), Lima, G. (Brazil), Lino, J. (Portugal), Lopes, H. (Portugal), Lu, Jian (Hong Kong), Madureira, L. (Portugal), Maia, L. (Portugal), Mal, A. (USA), Marques, A.T. (Portugal), Masato, Y. (Japan), Meda, A. (Italy), Meguid, S.A. (Canada), Melo, F.Q. (Portugal), Michaelis, K. (Germany), Mileiko, S.T. (Russia), Miller, R.E. (Canada), Mines, R. (UK), Miranda, R. (Portugal), Miyano, Y. (Japan), Moreira, F. (Portugal), Moreira, P. (Portugal), Morimoto, Y. (Japan), Moura, M.F. (Portugal), Navarro, C. (Spain), Navas, H. (Portugal), Pappalettere, C. (Italy), Pieczyska, E. (Poland), Piloto, P. (Portugal), Pindera, M.J. (USA), Prime, M. (USA), Quelhas, O. (Brazil), Ramesh, K. (India), Reddy, J.N. (USA), Restivo, M.T. (Portugal), Ribeiro, J. (Portugal), Robinson, J. (Ireland), Rocha, A.B. (Portugal), Rodrigues, V. (Portugal), Ruiz, G. (Spain), Ruzicka, M. (Czech. Rep.), Sainov, V. (Bulgaria), Santos, J.M. (Portugal), Semenski, D. (Croatia), Silva, A.J. (Portugal), Silva, Lucas (Portugal), Silva Gomes, J.F. (Portugal), Sjö Dahl, M. (Sweden), Soares, C.M. (Portugal), Sousa, Luísa (Portugal), Sousa, Rui (Portugal), Suleman, Afzal (Portugal), Takagi, T. (Japan), Talaia, M. (Portugal), Tamalsky, E. (Brazil), Tamuzs, V. (Latvia), Tavares, J.M. (Portugal), Tavares, P. (Portugal), Tooren, M.J. (Netherlands), Truman, C.E. (UK), VanHemelryck, D. (Belgium), Varum, H. (Portugal), Vasques, C. (Portugal), Vaz, Mário P. (Portugal), Viana, J.C. (Portugal), Vilas-Boas, J. (Portugal), Wang, Wei-Chung (Taiwan), Weng, G. (USA), Yoneyama, Satoru (Japan), Yoon, Y.C. (Singapore), Zhang, Z. (China).

Objectives

M2D'2015 is the sixth 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 July 26-30, 2015 in Ponta Delgada/Azores, 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

- **Analytical and Numerical Tools:** FEM, BEM and Hybrid Methods , Analysis of Structural Components , Optimum Design Techniques , Metal Forming and Metal Cutting, Dynamics and Vibration , Computational Methods in, Failure Diagnostics , Dynamic Loading of Structures , Reliability Assessment.
- **Testing and Diagnostics:** Condition Monitoring, Destructive and Nondestructive Testing, Damage Mechanics and Assessment, Prototyping and Full-Scale Testing, Vibration Monitoring, Failure Diagnostics, Residual Stresses.
- **Surface and Interface Engineering:** Functionally Graded Materials, Smart Structures and Materials, Coatings Plating and Metal Finishing, Tribology and Failure of Interfaces, Surface Integrity , Surface Treatments, Adhesive Bonding.
- **Civil Engineering Applications:** Structural Analysis, Structural Integrity, Experimental Tests & Structural Monitoring, Experimentation in Geoseismology, Concrete and Composite Structures, Metallic Structures, Structural Rehabilitation.
- **Sensors and Instrumentation:** Optical Techniques and Interferometry, Optical Fibres, Nondestructive Tools in Design, Advanced Mechanical Testing, Condition Monitoring, Self-sensing Materials, Self-healing Materials.
- **Tribology, Gears and Transmissions:** Gears and bearings, High speed wheel / rail systems, Clutches, Lubrication, Lubricants and additives, Surface coatings and heat treatments, micropitting, pitting, scuffing and wear.
- **Mechanical Design and Prototyping:** Mechanical Design, Product Development, Additive Manufacturing, Prototyping, Design for Manufacturing, Eco-design, Conversion Technologies.
- **Modes of Failure:** Fatigue, Corrosion-Fatigue, Stress Corrosion Cracking, Fatigue Creep Interaction, Environmentally Assisted Failures, Brittle Fracture, Buckling, Impact Failure.
- **Composite and Advanced Materials:** Fibres, Matrices and Interfaces, Polymer, Ceramic, Carbon, Metal and, Multifunctional Composites, Fabrication and Recycling, Durability, Damage and Fracture, Health Monitoring and Repairability, Applications: buildings, automotive, aeronautical, aerospace, medical, etc...
- **Nanotechnologies & Nanomaterials:** NEMS and MEMS Technologies, Nanocomposites, Nanodevices, Diagnostics and Control, Nanosensors, Molecular Devices.
- **Biomechanical Applications:** Mechanics and Design of Protheses, Biomaterials and Biocompatibility, Stress Monitoring, Dental and Orthopaedic Biomechanics, Sports and Rehabilitation Biomechanics, Biofluid Mechanics, Medical Devices.
- **Energy and Thermo-Fluid Systems:** Granular Flow, Thermal Barrier Coatings, Heat And Mass Transfer, Experimental Fluid Dynamics, Solid-Fluid Interactions, Interfacial Dynamics, Large Scale Eddy and Turbulence Analysis.
- **Impact and Crashworthiness:** Testing Techniques, Measurement in Dynamics, Earthquake Engineering, Crashworthiness, Ballistic Studies, Shock Loading, Energetic Materials, Impact Behaviour of Materials. .
- **Case Studies:** We would welcome real engineering applications, case histories and case studies that involve the use of experimental techniques in engineering applications to design, manufacturing and monitoring of structures, materials and processes.

Thematic Symposia

Thematic symposia will be organized under the auspices of the M2D'2015 conference. The list of thematic Symposia is still opened and those that have been proposed so far are as follows:

1. BEST PRACTICES IN TEACHING MECHANICS
2. EXPERIMENTAL MECHANICS IN DESIGN
3. DYNAMICS, STABILITY AND CONTROL IN STRUCTURAL ENGINEERING: CASE STUDIES
4. ANALYSIS DESIGN AND TESTING OF TOWERS AND POLES
5. DESIGN AND PRODUCT DEVELOPMENT
6. MECHANICAL BEHAVIOUR OF WOOD AND WOOD-COMPOSITES
7. MECHANICAL BEHAVIOUR OF BONE
8. MULTIFUNCTIONAL NANOCOMPOSITES
9. SYSTEMATIC INNOVATION AND LEAN APPROACH IN ENGINEERING
10. SEISMIC BEHAVIOUR CHARACTERIZATION AND STRENGTHENING OF CONSTRUCTIONS
11. MECHANICS AND MATERIALS IN DENTAL MEDICINE
12. OPTIMIZATION FOR SUSTAINABLE DEVELOPMENT
13. CARDIOVASCULAR AND ORTHOPEDIC MECHANICS DESIGN
14. MATERIALS SELECTION IN DESIGN
15. DURABILITY IN COMPOSITE SYSTEMS
16. MICROFABRICATION: RECENT ADVANCES IN MANUFACTURING TECHNOLOGIES AND NDT
17. MECHANICAL BEHAVIORS OF ADVANCED MATERIALS & STRUCTURES AT ALL SCALES
18. MECHANICAL BEHAVIOR OF SOFT BIOMATERIALS
19. NON-DESTRUCTIVE INSPECTION TECHNIQUES FOR MATERIALS AND STRUCTURES
20. THERMAL COMFORT IN BUILDINGS
21. TRIBOLOGY TRENDS FOR HIGHER EFFICIENCY AND RELIABILITY
22. RECYCLING AND RE-USE OF INDUSTRIAL AND HOUSEHOLD WASTES INTO NEW COMPOSITE MATERIALS
23. QUALITY CONTROL AND METROLOGY IN ENGINEERING
24. THERMODYNAMICS AND FLUIDS
25. COMPUTATIONAL MECHANICS IN DESIGN
26. FIBER BASED MATERIALS: DESIGN, DEVELOPMENT AND APPLICATIONS
27. THIN FILMS AND COATINGS IN TRIBOLOGY
28. ADVANCED DISCRETIZATION TECHNIQUES IN COMPUTATIONAL MECHANICS
29. SAFETY IN WOOD MATERIALS
30. MECHANICS AND THERMOMECHANICS OF SUPERELASTIC AND SHAPE MEMORY MATERIALS
31. FIRE AND STRUCTURAL ENGINEERING
32. IDENTIFICATION, MONITORING/CONTROL OF CIVIL STRUCTURES
33. OPTICAL METROLOGY

Technical Exhibition

M2D'2015 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.