

MATERIALS CHARACTERISATION 2021

**10th International Conference on Computational
Methods and Experiments in Material
and Contact Characterisation**

7 – 9 July 2021 | Madrid, Spain

Organised by

Wessex Institute, UK
University of Groningen, The Netherlands
University of Windsor, Canada

Sponsored by

WIT Transactions on Engineering Sciences
International Journal of Computational Methods
and Experimental Measurements



The aim of the conference is to facilitate interaction between the research and industrial community and discuss the latest developments in this rapidly advancing field. The meeting responds to the demand for high quality production for both industry and consumer, which has led to rapid developments in materials science and engineering. This requires the characterisation of the properties of the materials.

Of particular interest to industry and society is the knowledge of surface treatment and contact mechanics of these materials to determine the in-service behaviour of components subject to contact conditions. Modern society requires systems that operate at conditions that use resources effectively. In terms of components durability, the understanding of surface engineering wear frictional and lubrication dynamics has never been so important.

Current research is focussed on modifications technologies that can increase the surface durability of materials. The characteristics of the system reveal which surface engineering methods should be chosen and as a consequence it is essential to study the combination of surface treatment and contact mechanics.

Combinations of different experimental techniques as well as computer simulation

methods are essential to achieve a proper analysis. A very wide range of materials, starting with metals through polymers and semiconductors to composites, necessitates a whole spectrum of characteristic experimental techniques and research methods.

The conference is a result of a series of meetings that started as early as 1993 in Southampton on contact mechanics and previous meetings on the wider field of material characterisation dating from the 2003 conference in Santa Fe, New Mexico. The papers presented at all those conferences are permanently archived in the eLibrary of the Wessex Institute (www.witpress.com/elibrary) where they are easily accessible in Open Access format to the international scientific community.

Conference Topics

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

Experimental and measurement techniques

Mechanical testing and characterisation

Composites

Characterisation at multiple scales

Corrosion and erosion

Damage, fatigue and fracture

Recycled and reclaimed materials

Emerging materials and processing technology

Materials for energy systems

Contact mechanics

Coatings and surface treatments

Tribology and design

Biomechanical characterisation and applications

Residual stresses

Polymers and plastics

Computational methods and simulation

Biological materials

Evaluation and material processing

Benefits of Attending

USB Drive

Delegates will receive a USB drive at the conference containing the presented papers.

Publication

Papers presented at Materials Characterisation 2021 are to be published in a Volume of WIT Transactions on Engineering Sciences (ISSN 1743-3533). The publication will be available in both electronic and hard copy.

Indexing

The WIT Transactions are DOI registered with CrossRef and are currently listed in indexing services such as Scopus and Google Scholar, as well as being submitted to the Web of Science. All conference books are listed in the British Library and American Library of Congress.

Open Access and Digital Archive

All conference papers are archived permanently on our electronic library where they can be downloaded for free. (www.witpress.com/elibrary)

Peer Review

To ensure the quality of our publications, abstracts and papers are double peer-reviewed by members of the International Scientific Advisory Committee and other experts, with manuscripts processed through CrossRef Similarity Check to screen for plagiarism.

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.

Networking

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

Journal Publication Opportunity

After the conference, delegates will be invited to submit an enhanced version of their conference paper to one of the WIT Press International Journals.

Conference Chairmen

Santiago Hernandez

University of A Coruna, Spain
Member of WIT Board of Directors

Jeff De Hosson

University of Gronigen, The Netherlands

Derek O Northwood

University of Windsor, Canada

International Scientific Advisory Committee

Amelia Almeida

Lisbon University, Portugal

Djamila Benyerou

University of Science and Technology of Oran - Mohamed-Boudiaf, Algeria

Cristina Bignardi

Polytechnic University of Turin, Italy

Ieda Caminha

National Institute of Technology, Brazil

Franco Concli

Free University of Bolzano/Bozen, Italy

Marcello Conte

Anton Paar TriTec SA, Switzerland

Patrick De Wilde

Free University of Brussels, Belgium

Dawood Desai

Tshwane University of Technology, South Africa

Howie Fang

University of North Carolina at Charlotte, USA

Matthieu Horgnies

LafargeHolcim Innovation Center, France

Frank Huberth

Fraunhofer Institute for Mechanics of Materials IWM, Germany

Zulfiqar Ahmad Khan

Bournemouth University, UK

Ants Koel

Tallinn University of Technology, Estonia

Alireza Maheri

University of Aberdeen, UK

Vaclav Ocelik

University of Groningen, Netherlands

Jose Ortiz-Lozano

University of Aguascalientes, Mexico

Toomas Rang

Tallinn University of Technology, Estonia

Adil Saeed

Bournemouth University, UK

Hitoshi Takagi

Tokushima University, Japan

Kenichi Takemura

Kanagawa University, Japan



© Escarabajo Amarillo



© Madrid Visitors & Convention Bureau

Location

Madrid is the political, economic and cultural centre of Spain. Since Philip II made Madrid the capital of the country in the 16th Century, the city has grown to become one of the most beautiful cities in Spain. While possessing a modern infrastructure, it has maintained most of its magnificent architecture through the centuries, preserving the look and feel of many of its historic neighbourhoods and streets. Madrid's cultural highlights include the "El Prado" and "Reina Sofia" museums which show works from Picasso, Velazquez and Gaudi as well as many other international artists. Other sights are the Royal Palace and Gardens, as well as tree-lined avenues which add to the charm of the city. Madrid town hall square or Plaza Mayor is one of the best places to enjoy the famous Spanish gastronomy and nightlife.

Venue

The Tryp Atocha Madrid is built within a splendid palace dating back to 1913 and retains its original architectural detail and beauty. Located in the historical heart of the city, called "Barrio de las Letras" (Arts District), the hotel is within walking distance from the city's main museums: the Prado Museum, the Thyssen Museum and the Reina Sofia Museum, delicious tapas bars, chic shops and exciting night life. The hotel is also within walking distance from the main train station in Madrid (Atocha station).



© Melia Hotels

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/materials2021

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



For more information visit: www.witconferences.com/materials2021