Brussels

Since the end of the Second World War, Brussels has been a major centre for international politics and has become the polyglot home of numerous international organizations, politicians, diplomats and civil servants.Brussels is the de facto capital of the European Union as it hosts a number of principal EU institutions.

The architecture in Brussels is diverse, and spans from the clashing combination of Gothic, Baroque and Louis XIV styles on the Grand Place to the postmodern buildings of the EU institutions. The Grand Place is the main attraction in the city centre and is a UNESCO World Heritage Site since 1998. Other landmarks in the centre include the St. Michael and Gudula Cathedral, the Royal Palace and the Palace of Justice, the Manneken Pis being a tourist attraction and symbol of the city. The Atomium is a symbolic 103-metre (338 ft) tall structure that was built for the 1958 World's Fair.

Brussels contains over 80 museums.The Royal Museums of Fine Arts has an extensive collection of various painters, such as Flemish painters like Bruegel, Rogier van der Weyden, Robert Campin, Anthony van Dyck, and Jacob Jordaens. The Magritte Museum houses the world's largest collection of the works of the surrealist René Magritte. Museums dedicated to the national history of Belgium include the BELvue Museum, the Royal Museums of Art and History, and the Royal Museum of the Armed Forces and Military History.

Conference Topics

Scope: Modeling and Simulation challenges in Aeronautics, Automotive, Logistics, Marine and Railway Transport

Application areas:

Urban mobility and multimodal transport, Transport infrastructure management and design, In silico Blue Technologies, Aircraft and Vehicle Technology, Environmetal impact simulation, Security and safety, Vehicle and user communication enterfaces and Logistics

Topics

CFD & Wave problems: Aerodynamics and Hydro dynamics, Acoustics and Aero-acoustics. Electromagnetism

Structural mechanics and dynamics & FSI

Uncertainty Quantification in transport

Optimization and control: Route and navigation, Mission Path Planning, Fleet Ground, Marine and Air management, Optimal design, Traffic management, Big Data platform

Conference Secretariat

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Venue

CM3 2017 will be hosted by the EC DG Research & Innovation, at Covent Garden, Place Rogier, 16 1210 - Saint-Josse-Ten-Noode, Brussels

Submissions and Registration

Submissions and conference registration should be performed electronically via the conference web site: http://congress.cimne.com/CM3-2017/

Organized by

ECCOMAS
European Community on Computational Methods in Applied Sciences

ECCOMAS Thematic Conference

CM3 – Computation and Big Data in Transport

Research solving Societal and Industry Challenges in Automotive, Aeronautics, Logistics, Maritime and Railways

November 22-24, 2017, Brussels, Belgium

Under the auspices of

Industry Interest Group event

http://congress.cimne.com/CM3-2017/

Objectives

In the upcoming decade the integration of Advanced Multidisciplinary Simulation (MS), Optimization (MO) and Big Data Analysis (MBDA) tools will have a major impact on systemic procedures in both industrial and societal environments linked to Smart, Green and Integrated Transport Challenges including the infrastructure and the services, with an impact to the ENERGY UNION priorities.

Multidisciplinary Scientific Computing is now one of the powerful design technologies used in industry. This trend has been enhanced by the ever increasing capabilities of computational technology, storing of information and the decreasing cost of computer hardware. Analysis of Multidisciplinary Big Data is also becoming extremely important in process control, intelligent systems for surveillance and safety procedures.

Opportunities offered by Multi Physics, Multi Scales and Multi Big Data (CM3) methods span the industrial spectrum, including greener technologies for Aerospace, Automotive, Logistics, Marine and Maritime, Rail, among other sectors. In all these multi disciplinary areas industrial designers are faced with greener Transport challenges with their key objectives targeted in the ambitious Horizon 2020 program: sustainable Transport; seamless Transport and competitive Transport.

To answer these green challenges and their innovative solutions the new ECCOMAS Industrial Interest Group (IIG) is organizing in Brussels the second of an ECCOMAS Thematic Conference series focused on the Transport Challenges named CM3. A large participation of SMEs, Industries and European Technology platforms for Aviation Research, Road Transport Research, Rail Research, Waterborne Research and Logistics Innovation and as well as academy institutions is expected attending the CM3 2017 Conference hosted by EC- DG Research and Innovation.

CM3 2017 is the 2nd of the series of ECCOMAS Thematic Conferences organized by the ECCOMAS Industrial Interest Group (IIG) and part of the dissemination of the H2020 E-CAero2 project.

Advisory Committee (to be confirmed)

- Adel Abbas (UPM, Spain)
- Boris Chetveruskin (RAS, Russia)
- William Fitzgibbon (Univ. Houston, USA)
- Blas Galvan (ULPGC-CEANI, Spain)
- Herbert Mang (TUW, Austria)
- Michael Kyriakopoulos (EC DG research & Innovation)
- Trond Kvamsdal (NTNU, Norway)
- Mårten Levenstam (VOLVO, Sweden)
- Pekka Neittaanmäki (University of Jyväskylä, Finland)
- Eugenio Onate (CIMNE, Spain)
- Carsten Othmer (VOLKSWAGEN,Germany)
- Manolis Papadrakakis (NTUA, Greece)
- Carlo Poloni (ESTECO, Italy)
- Stephen Rolston (AIRBUS, UK)
- Daniele Vigo (UNIBO)
- Xabier Larrayoz (SEAT, Spain)

Chairmen of the Conference

- Olli Bräysy (University of Jyväskylä, Finland)
- Pedro Diez (UPC & CIMNE, Spain)
- Jacques Periaux (CIMNE, Spain)
- Birger Raa (UGent, Belgium)

Local Organising Committee

- Rodrigo Amaral (UGent, Belgium)
- Jordi Pons (CIMNE, Spain)
- Tero Tuovinen (University of Jyväskylä, Finland)

Academic Committee (to be confirmed)

- El-Houssaine Aghezzaf (UGent, Belgium)
- Michel Bierlaire (EPFL, Switzerland)
- Blas Galvan (ULPGC, Spain)
- Mikael Collan (LUT, Finland)
- Josef Eberhardsteiner (TUWIEN, Austria)
- Bruce Golden (University of Maryland, USA)
- Geir Hasle (SINTEF, Norway)
- Werner Heid (PTV Group, Germany)
- Chris Lacor (VUB, Belgium)
- Alexander Maslov (Keldysh Institute, Russia)
- Roberto Montemanni (IDSIA, Switzerland)
- Rafael Montenegro (SIANI, Spain)
- Marko Mäkelä (University of Turku)
- Olivier Pironneau (UPMC, France)
- Panagiotis Repoussis (SIT, USA)
- Mikael Rönnqvist (Laval University, Canada)
- Ahti Salo (Aalto University, Finland)
- Christos D. Tarantilis (AUEB, Greece)
- Mariano Vasquez (BSC, Spain)
- Olli Ventä (VTT, Finland)
- Viktor Zakharov (SPBU, Russia)

Industrial Committee (to be confirmed)

- Tiina Ahola (Oy Attracs Ab, Finland)
- Pål Bergan (EnergyNest AS, Norway)
- Joaquin Brito (Plocan, Spain)
- Jordi Caus (Centro Tecnico de SEAT SA, Spain)
- Frans Cruijssen (ETC-Alice Platform, Netherlands)
- Joaquim Gromicho, (ORTEC)
- Charles Hirsch (NUMECA International, Belgium)
- Harri Eskelin (Suppilog Oy, Finland)
- Timo Honkanen (Vaisala OYJ, Finland)
- Michel Mallet (Dassault Aviation, France)
- Javier Marcipar (Quantech, Spain)
- Charles Mockett (CFD Sofware E+F GmbH, Germany)
- Robert de Muynck (Netherlands Aerospace Centre)
- Agustin Navarro (Lyncos Technologies SL, Spain)
- Matteo Pozzi (Optit, Italy)
- Luka Onesti (ESTECO SpA, Italy)
- Daniel Redondo (Airbus, Spain & Geza Schrauf, Gemany)
- Mikael Törmänen (Volvo Car Corporation, Sweden)
- Vittorio di Vito (CIRA, Italy)

Both academic and industrial committees may be enlarged, see updates at http://congress.cimne.com/CM3-2017

ECCOMAS Industry Interest Group

The ECCOMAS Industry Interest Group (IIG) is actively promoting the CM3 2017 conference. CM3 is a tool to achieve two of the objectives of the IIG: strengthening the ECCOMAS industrial liaison and developing contacts between ECCOMAS and the European Commission (in particular the different DGs).

Format of the Conference

The format of the CM3 event will include Plenary lectures, Keynote presentations, Mini-symposiums and Forum, contributed papers, and dissemination of EC projects. Moreover, we will organize Special Technology Round Table Sessions (STS) for axes major application of the conference and Forum.

Fees

Early registration	**Deadline: March 22, 2017**
Early fees	**Delegates 490 €, students 350 €**
Late fees	**Delegates 590 €, students 410 €**

ECCOMAS and IACM members will have a 5% reduction on the delegate fees. The fees will include: conference proceedings, attendance at all the scientific sessions, coffee breaks, reception and banquet.

Important Dates

Deadline for presenting a one to four pages abstract	**September 8, 2017**
Decision on the acceptance	**October 2, 2017**
Deadline for registration to have the paper included into program	**October 30, 2017**
The CM3 Conference	**May 22–24, 2017**

Full-length papers arising from the conference contributions will be included in a book. The conference participants willing to contribute to this book have to submit an abstract to the conference organizers during the conference. The selected papers to be submitted by August 15, 2017 will follow a peer review process and will be published tentatively by Springer-ECCOMAS.

How to register and submit contributions

Authors are invited to submit individual contributions related to any of the conference topics. You may choose between a communication or a poster. Submission and conference registeration have to performed electronically, via conference website: http://congress.cimne.com/CM3-2017/