## **Associated Multiphysics Events:**



21-22 October 2014
Manchester, UK
Second NAFEMS European
Conference on Multiphysics
http://www.nafems.org/mp2014



19-20 June 2014 Marseille, France SimBio-M: BioMechanics, BioMaterials and BioMedicine http://simbio-m.ifsttar.fr/



27-29 March 2013 Okinawa, Japan International Symposium on Explosion, Shock wave and Highenergy reaction Phenomena 2013 http://eshp2013.okinawa-ct.ac.jp/



16-17 October 2012 Frankfurt, Germany First NAFEMS European Conference on Multiphysics http://www.nafems.org/mp2012



24-26 September 2012
Caracas, Venezuela
The Second Latin American and
Caribbean Conference on
Theoretical and Applied Mechanics
http://eventos.saber.ula.ve/eventos/conferenceDisplay.py?confld=203

If you are interested in organising an event associated with The International Society of Multiphysics, please contact the Society Coordinator.

## **Multiphysics Student Chapter:**

The International Society of Multiphysics encourages students to participate in Multiphysics events. The Society has launched discounted membership rates for students.

#### **Multiphysics Student Award:**

The International Society of Multiphysics welcomes all students and encourages them to participate in the annual Multiphysics conference by submitting an abstract of their work. A panel of judges will recommend the award of a prize to the winner of the competition. The previous winners of this award are:

**2013:** M. Khan, University of Cambridge, UK **2012:** H. Frid, Royal Institute of Technology,

Stockholm, Sweden

**2011:** P. Dongmei, The Hong Kong Polytech

University, Hong Kong

**2010:** M. Shibuta, Kumamoto University, Japan **2009:** H. Khawaja, University of Cambridge, UK

# **Membership and Contact:**

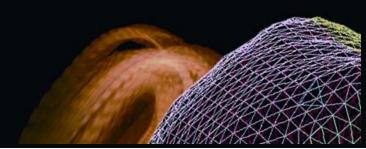
Hassan Abbas Khawaja Society Coordinator coordinator@multiphysics.org

# The International Society of MULTIPHYSICS

Newsletter 2014

www.multiphysics.org





Multiphysics analysis has been developed over the recent past to better represent the behaviour of complex processes by the use of simultaneous modelling of a number of systems. This development is driven by the industrial need to further the understanding of real physical phenomena in order to develop and design safer and more efficient products which are environmentally friendly.

Such analyses and investigations were impossible to perform a number of years ago due to a lack of powerful computing systems. However, the advances in computer hardware have led to more sophisticated investigations brought about by increased computation speeds. Since this has been accompanied by new software packages which exploit the improved architecture of new generation microprocessors, there have been dramatic improvements in coupling of many mathematical techniques. simulation Manv research establishments are comparing the results of such studies with experimental tests to improve modelling accuracy and validate the processes for future certification.

There is now a number of large science and engineering communities whose research is being customised towards Multiphysics analytical and simulation methods in order to save costs and reduce time to market with the use of rapid prototyping.

# The International Society of Multiphysics:

The International Society of Multiphysics act as a focus for studies, which demand simultaneous addressing of hitherto separate physical disciplines and combining them to generate relational mathematical models and validate them with controlled experiments to enhance the understanding of natural behaviour with a view to improving the quality of lives and promote an environmentally sustainable future.

The aim of the society is to enable all those interested in Multiphysics to discuss and disseminate the most up-to-date research findings for purposes of product and process improvements. This will encompass maximisation of Multiphysics dialogue across national borders at all levels, collaboration between researchers, institutions, industry and governments, and development of curriculum for the higher education sectors worldwide.

The objective is to be recognised by all relevant agencies, as a society which promotes the integration of multi-disciplinary sciences and contributes to the future needs of scientific advancement.

#### The International Journal of Multiphysics:

The International Journal of Multiphysics publishes peer-reviewed original research articles, review papers and communications in the broadly defined field of Multiphysics.

The emphasis of this journal is on the theoretical development, numerical modelling and experimental investigations that underpin Multiphysics studies.

Articles will include fundamental developments as well as industrial applications.

#### **Special Editions:**

2014: Special Issue on "Simulation of Pressure Vessels and Piping.

2013: Special Issue on 'Two Phase Computational Fluid Dynamics Applications'.

2012: Special Issue on 'Marine Applications of Composite Structures and materials'.

2011: Special Issue on 'Multiphysics Simulations – Advances Methods for Industrial Engineering'.

# The International Conference of Multiphysics:

The objective of the conference is to share and explore findings on mathematical advances, numerical modelling and experimental validation of theoretical and practical systems in a wide range of applications.

The scope of the conference is to address the latest advances in theoretical developments. numerical modelling and industrial application which will promote the concept of simultaneous engineering. Typical combinations would involve a selection from subject disciplines such as Acoustics, Electrics, Explosives, Fire, Fluids, Magnetic. Soil. Structures and Thermodynamics. In the past Multiphysics Conferences have been organised in Maribor-Slovenia, Manchester-UK, Narvik-Norway, Lille-France, Kumamoto-Japan, Barcelona-Spain, Lisbon-Portugal, Amsterdam-The Netherlands and Sofia-Bulgaria. The researcher from all around the world participated in these events. Organisers and management committee present their thanks to all attendees for making these events successful.

The Tenth International Conference of Multiphysics will be organised in London, United Kingdom on 10-11 Dec 2015. Please find further details in The International Conference of Multiphysics 2015 call and announcement brochure.

#### MULTIPHYSICS 2015 10-11 December 2015 London, United Kingdom

