First TMS-ABM International Materials Congress

July 26-30, 2010 • Intercontinental Rio Hotel • Rio de Janeiro, Brazil

To be held in conjunction with the 65th Annual Congress of ABM and the 18th IFHTSE Congress

Organizing Committee

S. Neves Monteiro (overall coordinator of the 2010 ABM meeting), **G. T. Gray III** (TMS president, 2010), **R. Peterson** (TMS president, 2009), **M. A. Meyers** (ABM representative at TMS)

About the Congress

Held in conjunction with 65th Annual Congress of ABM (Brazilian Metallurgical, Materials and Mining Association) and the 18th IFHTSE Congress, this inaugural congress will feature seven proposed symposia covering important contemporary issues in materials science and engineering. This congress builds on the TMS Alliance of the Americas initiative to work together with Society partners in South America and Canada. The congress will be held at the Intercontinental Rio Hotel. A host of social events will be organized, including a conference banquet, networking reception, and an afternoon excursion. Also, industrial tours will be offered, as well as a number of local sight-seeing tours (Ilha Grande, Parati). Details will be added to the 2010 TMS-ABM conference website as they become available, please visit **http://www.tms.org/meetings/specialty/ABM-TMS/home.aspx**.

Symposium Themes

Light Weight Materials for Transportation: Processing and Properties

Organizers: **Carlos de Moura Neto** (ITA), **Ray D. Peterson**, (Aleris International), **Diran Apelian** (WPI), **Helio Goldenstein** (USP)

With recent spikes in energy costs and the desire to make more fuel-efficient vehicles of all types, material selection and manufacturing will remain critical to the advancement of transportation technology. All aspects of transportation can benefit from a reduction in total mass through the selection of less dense, higher strength, or more highly engineered materials. In addition to improved fuel efficiency many side benefits are possible through proper materials selection and application. These benefits include improved sustainability (both carbon footprint and recyclablity), greater safety, and lower life cycle cost, to name a few.

This symposium will examine the development and uses of both conventional and new materials for all applications in the Transportation Industry. Both the materials and the methods of manufacturing these materials will be discussed in this symposium. A specific area of focus will be solidification processing of light weight metals and composites. Land, marine and aerospace modes of transportation will be included in the Symposium.

Other Topics Include:

Characterization and Application of Biomaterials

Organizers: **S.N. Monteiro** (UENF, Brazil), **K.G. Satyanarayana** (UFPR, Brazil), **R. O. Ritchie** (U C Berkeley), **P. Rohatgi** (U. Wisconsin-Milwaukee), **K. G. Satyanarayana** (UFPR, Brazil

Composite Materials

Organizers: **N. Chawla** (Arizona State University, United States), **R.D. Toledo Filho** (Universidade Federal do Rio de Janeiro, Brazil), **K.K. Chawla** (University of Alabama at Birmingham, United States), **J.R. D'Almeida** (Pontifica Universidade Catolica do Rio de Janeiro, Brazil)

Computational Modeling and Advanced Characterization

Organizers: **Michael J. Kaufman** (Colorado School of Mines), **Rajarshi Banerjee** (Univ. of North Texas), **Andre Costa e Silva** (EEIMVR- Universidade Federal Fluminense - IBQN), **Fernando C Rizzo** (PUC Rio de Janeiro RJ)

Dynamic Behavior of Materials

Organizers: **G. T. Gray III** (LANL), **M.A. Meyers** (UC San Diego), **Joao Carlos Miguez Suarez** and **Ricardo Pondé Weber**, (Instituto Militar de Engenharia, Rio de Janeiro, Brasil)

Materials and Society

Organizers: **M. Meyers** (U. C. San Diego), **T. Massalski** (Carnegie-Mellon University), **Fernando Rizzo** (PUC, Brazil), **Diran Apelian** (WPI)

Mechanical Properties of Materials with Emphasis on Grain-size Effects

Organizers: **M.E. Kassner** (USC), **P.R. Cetlin** (Univ. Federal de Minas Gerais)

To submit an abstract:

Abstracts must be submitted by November 30, 2009 via ProgramMaster featured on the 2010 TMS-ABM home page at **http://www.tms.org/meetings/specialty/ABM-TMS/home.aspx**