

**TMS Initiatives Related to ICME, MGI, Manufacturing, and Energy****Dr. George Spanos**

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**ABSTRACT** In the current TMS strategic plan, there are two technically-oriented strategic thrusts, centered about: (1) materials and manufacturing innovations, and (2) materials solutions for energy and environmental challenges. These two thrusts include a number of TMS activities in the form of meetings and conferences, publications, continuing education, and roadmapping studies. This presentation will provide an overview and highlights of a number of these activities. Both of the TMS technical strategic thrusts include efforts related to two broader activities within the Materials Science and Engineering Community: Integrated Computational Materials Engineering (ICME), and the Materials Genome Initiative (MGI). The TMS initiatives highlighted in this talk will thus be centered about ICME, MGI, manufacturing, and energy and sustainability. The presentation will conclude with a brief discussion of ways that those interested can get involved in some of these initiatives.



**George Spanos** is the Technical Director of The Minerals, Metals & Materials Society (TMS), a professional society headquartered in Warrendale, PA. As TMS Technical Director, Dr. Spanos is responsible for the technical direction of TMS, and contributes to the development and execution of the society's strategic plan. He received his B.S., M.E., and Ph.D. degrees in Metallurgical Engineering and Materials Science from Carnegie Mellon University. In 1989 he joined the Naval Research Laboratory (NRL) as a staff scientist, in 1994 was promoted to Section Head at NRL (Microstructural Evolution Section), and in June of 2010 joined TMS as their Technical Director. Dr. Spanos is author/co-author of over 100 technical publications which have been cited more than 2,900 times, in the field of phase transformations, processing-structure-property relationships, 3D materials analyses, and Integrated Computational Materials Engineering (ICME). Some of his past and present professional affiliations include: member of the Board of Governors of Acta Materialia Inc. (2008-2010), past chairman (1999) and member (1996-1999) of the Joint Commission for

*Metall. and Materials Trans.*, Chairman (1995-1996) and Key Reader (1992 - present) of the Board of Review of *Metall. and Materials Trans. A*. Some of his awards include: Fellow of ASM-International (2004), Marcus A. Grossman Award for best article in *Metall. and Mat. Trans.* for authors under 40 (2001), two Technology Transfer Awards at NRL (2000, 2005), and the NRL 2009 Commanding Officer's Award for Achievement in Equal Employment Opportunity (EEO).