



TMS 2011

140th Annual Meeting & Exhibition

February 27 to March 3, 2011

San Diego Convention Center • San Diego, California USA

Materials Cyberinfrastructure: What it is, Why it's Important, and Some Live Demonstrations

Wednesday, March 2, Noon to 1:50 p.m.

Exhibit Hall, Lunch & Learn Workshop Area

Overview

In a 2008 National Academies study on Integrated Computational Materials Engineering (ICME), the importance of an ICME cyberinfrastructure was discussed in some detail. Such a cyberinfrastructure is composed of elements including collaborative Web sites, repositories of various types of data, computational modeling tools, and collaboration software. This workshop will first provide a brief description of "materials cyberinfrastructure" and the importance of such an infrastructure to the materials community (particularly as it relates to ICME). This overview will be followed by four live demonstrations of some different elements of cyberinfrastructure, including: (1) a thermodynamics and phase diagram computational tool, (2) a collaborative 3D materials database platform, (3) a web-based resource for nanoscience and technology computational tools and collaborations, and (4) a consortium-based, collaborative modeling and simulation code platform.

Who should attend?

Anyone working in computational or experimental materials science and technology areas looking to support their research and/or engineering efforts by taking advantage of the benefits offered by a materials cyberinfrastructure. This includes researchers, engineers, and students from academia, industry, and national laboratories who want to develop a general understanding and awareness of materials cyberinfrastructure, and its great potential.

Topics

Introductory Presentation: "Materials Cyberinfrastructure: Definition and Recommendations from the 2008 National Academies Study on ICME" – John Allison

Live Demonstrations:

- "Thermo-Calc" – Paul Mason
- "3D Materials Atlas" – Andy Geltmacher
- "The NanoHub" – Alejandro Strachan
- "MatDL/MatForge" – Laura Bartolo

Speakers

John Allison, Professor, University of Michigan, Department of Materials Science and Engineering, Ann Arbor, MI

Paul Mason, President, Thermo-Calc Software Inc, McMurray, PA

Andy Geltmacher, Section Head, US Naval Research Laboratory, Washington, DC

Alejandro Strachan, Associate Professor of Materials Engineering, Purdue University, School of Materials Engineering, West Lafayette, IN

Laura Bartolo, Professor and Director, Center for Materials Informatics, Kent State University, Kent, OH

How to Register

This lunchtime workshop is included in the conference registration fees. For more information about TMS2011, please visit the [TMS 2011 home page](#). Lunch is not provided, but there is a concession stand adjacent to the workshop area to purchase food, or feel free to bring your lunch from elsewhere.

For More Information

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