



**METLAB**  
MATERIALS EVALUATION AND TESTING



**Abstract deadline extended to March 15, 2012, - Revised Call for Papers**

# **Conference on Engineering Materials: *Evaluation, Flaw Detection and Processing***

**May 17-19, 2012** – South Dakota State University Campus, Brookings, SD

The Materials Evaluation and Testing Laboratory (METLAB) in the Mechanical Engineering Department at South Dakota State University (SDSU), with support from The Department of Defense (DoD) and American Science and Technology (AST) will hold their second biennial conference on Engineering Materials – Evaluation, Flaw Detection and Processing. This conference focuses on recent developments, discoveries, modeling, testing and evaluation of engineering materials, smart materials and their processing. General topics of interest in engineering materials include but are not limited to:

#### ***Advanced Materials***

- Active and Smart materials
- Adaptive materials
- Composites materials and polymers
- Biomaterial and bio-inspired smart materials and structures
- Nano-materials
- Multifunctional materials
- Modeling, simulation and controls

#### ***Materials Behavior***

- Mechanics, constitutive modeling, and behavior of materials
- Fatigue and fractures of materials
- NDE of materials
- Experimental and analytical stress analysis
- Dynamic modeling of materials
- Wave propagation in materials

#### ***Material Processing***

- Casting, forming and machining
- Additive processing and joining technologies
- Material properties evaluation under manufacturing processes
- Surface engineering related to a manufacturing process

#### ***Structural Applications***

- Structural health monitoring/NDE
- Material damping
- Damage detection in structures and machinery
- Life prediction analyses of pressurized thick walled cylinders

- Abstract deadline: **March 15, 2012**
- Notification by **April 1, 2012**
- Paper submission deadline: **June 1, 2012**

Submit abstract/paper online at [www.sd-metlab.org/conference](http://www.sd-metlab.org/conference)

**For technical questions, contact:**  
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**Note:** *The dates and deadlines have been revised to provide those submitting papers more time.*