Track 3: Advancement of Optical Methods in Experimental Mechanics

SEM 2014 Annual Conference & Exposition on Experimental and Applied Mechanics

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Organized by Optical Methods Technical Division: Helena Jin, *Sandia National Laboratories California;* Sanichiro Yoshida, *Southeastern Louisiana University;* Luciano Lamberti, *Politecnico di Bari, Italy*

Co-Sponsored by SEM Thermomechanics & Infrared Imaging and Inverse Problems TD

With the advancement in imaging instrumentation, lighting resources, computation power and data storage, optical methods have gained wide applications across the experimental mechanics society during the past decades. These methods have been applied for measurements over a wide range of spatial domain and temporal resolution. Optical methods have utilized a full-range of wavelengths from X-Ray to visible lights and infrared. They have been developed not only to make two-dimensional and three-dimensional deformation measurements on the surface, but also to make volumetric measurements throughout the interior of a material body.

The goal of this track is to provide a platform for researchers to exchange ideas and to encourage cross-fertilization of various disciplines. This track will cover a wide range of optical methods bridging multiple length and time scales.

Papers are sought in the following and other related areas:

- Advanced applications using polarized light
- Advanced optical interferometry methods
- Opto-acoustical methods in experimental mechanics
- Optical methods for advanced manufacturing
- Advanced optical methods for frontier applications
- Optical methods for inverse problems
- Digital image correlation
- Challenges in digital image correlation
- 3D imaging and volumetric correlation
- Innovative imaging techniques
- Imaging methods for thermomechanics applications
- Optical measurements in challenging environments
- Advances in optical methods

Keynote Presentations: TBD

Abstracts are due on October 1st, 2013.

Please check "OPT" for abstracts to be included in Optical Methods Track "Advancement of Optical Methods in Experimental Mechanics" when you submit.

For more information on abstract submission, please visit SEM's website at

http://sem.org/Conference-Abstract-Submission.cfm?ConfNumber=94840