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IMPORTANT DATES

October 17, 2018
Abstracts due to SEM

End of December 2018
Authors notified, via e-mail, of acceptance/rejection

February 25, 2019
Accepted authors are required to submit final paper electronically

LOCATION INFORMATION

Details can be found on the SEM web site, sem.org.
Contact the hotel directly for reservations:

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ABSTRACT SUBMISSION AND DETAILS CAN BE FOUND AT
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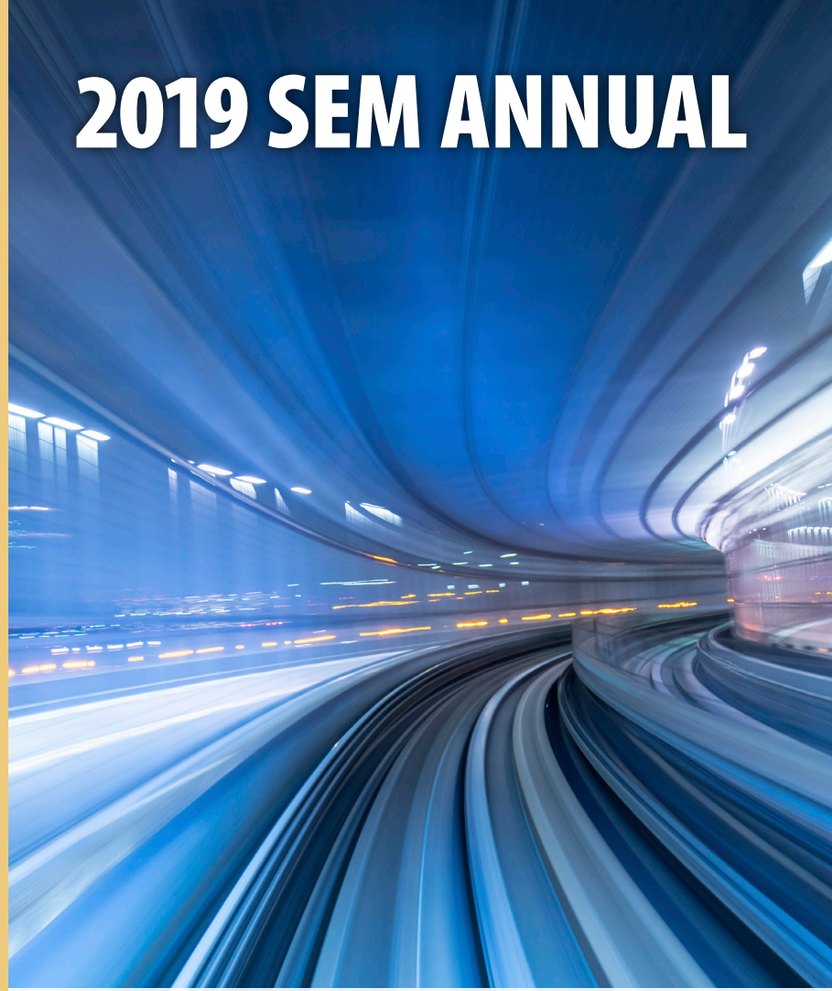

ANNUAL CONFERENCE AND EXPOSITION ON EXPERIMENTAL AND APPLIED MECHANICS

EXPANDING THE BOUNDARIES OF MECHANICS

JUNE 3–6, 2019 | RENO, NEVADA USA

CALL FOR PAPERS

20th International Symposium on Micro- and Nanomechanics (ISMAN)

Organized by: Jennifer Hay–*Nanomechanics, Inc.;* Nikhil Karanjgaokar–*Worcester Polytechnic Institute;* Frank DelRio—*National Institute of Standards and Technology*

Broadly, the Society for Experimental Mechanics (SEM) is committed to the promotion of scientific methods which further the understanding of the behavior of materials, structures, and systems, and practical engineering solutions which facilitate or incorporate such knowledge. Through the International Symposium on MEMS and Nanomechanics (ISMAN), we pursue these same goals as they relate to small-scale phenomena. We promote research efforts which press conventional experimental techniques and theories to their small-scale limits, as well as new physical insights and exploits at the nano-scale. Holding this symposium at the SEM Annual Meeting provides a venue where state-of-the-art experimental methods can be leveraged in these endeavors.

9th International Symposium on the Mechanics of Biological Systems and Materials

Organized by: Martha E. Grady–*University of Kentucky;* Jacob Notbohm–*University of Wisconsin Madison;* Christian Franck–*Brown University*

This symposium is motivated by the need for cross talk between experimental mechanics, materials science, biology, and medicine. The symposium fosters the exchange of ideas and information among scientists and engineers involved in the research and analysis of how mechanical loads interact with the structure, properties, and function of living matter and their constituents. The scope includes experimental, imaging, numerical and mathematical techniques and tools spanning various length and time scales which provide insight into biological systems and materials.

5th International Symposium on the Mechanics of Composite and Multifunctional Materials

Organized by: Raman P. Singh–*Oklahoma State University;* Vijaya Chalivendra–*UMass Dartmouth;* Frank Gardea–*US Army Research Lab*

Composites and multifunctional materials continue to revolutionize industrial applications due to superior structural performance, light weight and ability to tailor multiple functional properties. This symposium is focused on advancements in the fundamental and applications development of composite, multifunctional and hybrid materials. Session topics include: multifunctional materials, fracture & fatigue, recycled constituent composites, nano & particulate composites, hybrid composites, damage detection & NDE, manufacturing innovations, joining of composites, additive manufacturing, and novel composites for aerospace, automotive, & wind energy applications. A major goal of this symposium is to promote the development of new experimental techniques to address real-life applications and provide a platform for collaboration.

Dynamic Behavior of Materials

Organized by: Leslie Lamberson–*Drexel University;* Steven P. Mates–*National Institute of Standards and Technology;* Veronica Eliasson–*University of California San Diego*

This track covers a broad range of areas including material properties, structural response, advanced testing methods and diagnostics, as well as hybrid experimental/computational methods, under a variety of loading conditions from low-speed impacts to shock and blast. This track will also provide an open platform for the discussion of leading-edge and interdisciplinary topics related to the dynamic behavior of materials and structures.

Challenges in Mechanics of Time-Dependent Materials

Organized by: Meredith Silberstein–*Cornell University;* Alex Arzoumanidis–*Psylotech;* Alireza Amirkhizi–*University of Massachusetts Lowell;* Bonnie Antoun–*Sandia National Laboratories;* Jevan Furmanski–*ExxonMobil;* Richard Hall–*Air Force Research Laboratory;* Yuhang Hu–*University of Illinois at Urbana-Champaign;* Hongbing Lu–*University of Texas-Dallas;* Yong Zhu–*North Carolina State University*

We seek papers related to 1/experiment, 2/theory and 3/practical applications of time and rate dependence in materials, including polymers, metals, biomaterials, granular materials, gels, foams and glasses. Time dependence may involve damage, fracture, fatigue or durability, or papers may consider environmental effects, such as high pressure or solvent exposure. Characterization across length scales is encouraged, including effects of inhomogeneities and interfaces. Experimentally informed constitutive models and papers on additive manufacturing are welcome.

Advancement of Optical Methods in Experimental Mechanics

Organized by: Ming-Tzer Lin–*National Chung Hsing University;* Cosme Furlong–*Worcester Polytechnic Institute;* Chi Hung Hwang–*Instrument Technology Research Center, Taiwan;* Luciano Lamberti–*Politecnico di Bari*

Optical methods are widely used in the Experimental Mechanics community. This track aims to encourage researchers to exchange ideas and promote cross-fertilization of various disciplines. The track will cover a wide range of optical methods ranging from interferometric to DIC and DVC as well as hybrid methods. A special symposium, as part of this track, will be held to celebrate Prof. Cesar Sciammarella's 95th birthday and his vast contributions to experimental mechanics and to multiscale optical measurements.

Fracture and Fatigue

Organized by: Shuman Xia–*Georgia Institute of Technology;* Allison Beese–*Pennsylvania State University;* Ryan Berke–*Utah State University;* Garrett Pataky–*Clemson University;* Scott Grutzic–*Sandia National Laboratories;* Bala Sundaran–*Corning, Inc.*

This track will focus on advancing scientific understanding and experimental techniques relating to fracture and fatigue. This includes a wide range of related phenomena such as microstructure, plasticity, interfaces, extreme environments, and model/experiment integration. Work on a diverse set of materials will be presented including polymers, metals, ceramics, composites, energy materials, and additively manufactured materials.

Mechanics of Additive and Advanced Manufacturing

Organized by: Sharlotte Kramer–*Sandia National Laboratories;* Helena Jin–*Sandia National Laboratories;* Jennifer Jordan–*Los Alamos National Laboratory;* Piyush Thakre–*Dow-Dupont Company;* Allison Beese–*Pennsylvania State University;* Garrett Pataky–*Clemson University;* Emily Retzlaff–*United States Naval Academy;* Paul Allison–*University of Alabama;* Alireza Amirkhizi–*University of Massachusetts Lowell;* Michael Prime–*Los Alamos National Laboratory*

Papers are sought in the area of additive and advanced manufacturing including design, optimization, microstructure, experiments, computation, and materials for advanced manufacturing processes (3D printing, micro-nano manufacturing, powder bed fusion, directed energy deposition, etc.) with a particular focus on the mechanics aspects (e.g. mechanical properties, residual stress, deformation, failure, etc.). This track will feature co-organized sessions with Technical Divisions and keynote presentations by leading experts in the field.