

SMASIS Conference Synopsis

Adaptive Structures and Materials Systems by definition are intelligent, flexible systems that have sentience and responsiveness to ever changing environments. The field has rapidly matured due to synergistic interdisciplinary efforts across sectors of universities, government and industry. To continue the high impact growth of this field and lead it into the future, the purpose of this conference is to assemble world experts across engineering and scientific disciplines (mechanical, aerospace, electrical, materials, and civil engineering, biology, physics chemistry, etc.) to actively discuss the latest breakthroughs in smart materials, the cutting edge in adaptive structure applications and the recent advances in both new device technologies and basic engineering research exploration. The conference is divided into symposia broadly ranging from basic research to applied technological design and development to industrial and governmental integrated system and application demonstrations.

Schedule

April 8, 2016: 400 word abstract due
April 22, 2016: Authors informed of abstract acceptance
May 13, 2016: Full-length draft paper due
June 13, 2016: Authors informed of draft paper acceptance
June 21, 2016: Final revised paper due
July 12, 2016: Copyright form due

Full paper will appear in an archival ASME Conference Proceedings. Selected papers will be published in archival Journals.

Participation

Authors should submit a 400 word abstract to the conference web site

<https://www.asme.org/events/smasis>

Questions can be directed to:

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Executive Committee

Diann Brei, Greg Carman, Inderjit Chopra, Kon-Well Wang, Alison Flatau, Dan Inman, Nancy Johnson, Jay Kudva, Dimitris Lagoudas, Chris Lynch, Anna McGowan, Roger Ohayon, Greg Reich, Janet Sater, Sergio dos Santos e Lucato, Stefan Seelecke, Ralph Smith

Call for Papers

ASME Conference on SMART MATERIALS, ADAPTIVE STRUCTURES AND INTELLIGENT SYSTEMS

September 28 – 30, 2016
Stowe, VT, USA

Sponsored by the Adaptive Structures & Materials Systems Branch, Aerospace Division

The conference is divided into symposia broadly ranging from basic research to applied technological design and development to industrial and governmental integrated system and application demonstrations. The symposia specifically are:

Development and Characterization of Multifunctional Materials

Chair: Henry Sodano, Univ. of Florida

Co-Chairs: Gary Seidel, Virginia Tech

Constantin Ciocanel, Northern Arizona

Topical areas: Material formulations, evaluation, synthesis, and processing; multifunctional composites and hybrid materials; bio-inspired and nano-composites; self-healing materials; novel triggering approaches, including optical, chemical, electrical, and mechanical; material property enhancement; interface and interaction science.

Mechanics & Behavior of Active Materials

Chair: Jayasimha Atulasimha, VCU

Co-Chairs: Darren Hartl, Texas A&M Univ.

Nakhiah Goulbourne, U. Mich.

Topical areas: Advanced constitutive measurements, micro- and nano-mechanics of actuator & sensor materials, phase field modeling, multi-scale and multi-physics material models, finite element implementations, reliability issues: aging, fatigue, and fracture, materials for energy storage.

Modeling, Simulation and Control of Adaptive Systems

Chair: Uwe Marschner, TU Dresden

Co-Chairs: S. Nima Mahmoodi, Univ. Alabama

Manuel Collet, French Nat. Centre

Topical areas: Micro and macro level modeling, vibration and acoustic control, passive/semi-active/active damping and stiffness variation, actuation and motion control, intelligent and adaptive control, nonlinear control, hysteresis control, modeling simulation and control of micro/nano systems, nonlinear dynamics, and nonlinear vibration.

Energy Harvesting

Chair: Steve Anton, Tennessee Tech

Co-Chairs: Michael Shafer, Northern Arizona University

Amin Karami, U. of Buffalo

Topical areas: Modeling and experiments of energy harvesting using piezoelectric and magnetostrictive materials; dielectric, ferroelectric, and ionic electroactive polymers; inductive and capacitive devices; deterministic and stochastic excitations; broadband and nonlinear systems; aeroelastic, hydroelastic, and acoustic energy harvesting; MEMS and NEMS configurations; novel circuits and storage devices.

Integrated System Design and Implementation

Chair: Onur Bilgen, Old Dominion Univ.

Co-Chairs: Rich Beblo, Dayton Research Inst.

Jay Gao, GM

Topical areas: Sensors and actuators, power and control electronics, smart devices and technologies, compliant mechanism design, adaptive / intelligent / integrated systems design, smart structures design processes and tools, Industrial and Government smart products and system applications, smart electronics and devices, MEMS.

Structural Health Monitoring

Chair: Lingyu Yu, Univ. South Carolina

Co-Chairs: Andrew Swartz, Michigan Tech

Donghyeon Ryu, N.M. Tech

Topical areas: Damage identification & mitigation, sensor networks, data fusion, data mining and management, damage diagnostic and prognostic modeling software, system integration, and applications.

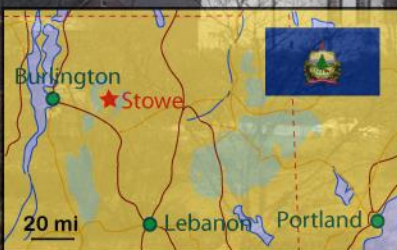
Bioinspired Smart Materials and Systems

Chair: Aimy Wissa, Univ. of Illinois

Co-Chairs: Eric Freeman, U. of GA

Yash Tummala, G.E.

Topical areas: Modeling of biological systems, understanding physical phenomena in biological systems, biomimetic and bio-inspired devices, machines and robotics, utilizing biological systems, smart prosthetic systems and intelligent implant materials and structures.



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