Call for Abstracts

ASME Conference on

SMART MATERIALS, ADAPTIVE STRUCTURES, AND INTELLIGENT SYSTEMS

September 13 – 16, 2026

Albuquerque, New Mexico

Sponsored by the Smart Materials, Adaptive Structures, and Intelligent Systems Division

SMASIS Conference Synopsis

Adaptive Structures and Materials Systems are intelligent systems with sentience and responsiveness to changing environments. This field has rapidly matured through interdisciplinary efforts. The conference aims to bring together global experts to discuss the latest smart materials breakthroughs and adaptive structure applications with high impact in sectors like automotive, aerospace, energy, consumer products, and medical technology.

Schedule

Mar 2nd	Abstracts due (for technical papers)
Mar 9th	Abstract acceptance notification (for technical papers)
Apr 13th	Technical papers due
May 11th	Technical paper review complete
May 18th	Technical paper acceptance notification
May 26th	Presentation-only abstracts due
Jun 8th	Abstract acceptance notification (presentation-only)
Jun 22nd	Final paper due, Author registration deadline

Full papers will appear in an archival ASME Conference Proceedings. High quality conference papers will be considered for publications in relevant ASME journals with an expedited review process. Authors please note: Only 2 presentations per author with one full registration.

Questions can be directed to:

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The conference is divided into symposia broadly ranging from basic research to applied technological design and development to industrial and governmental integrated systems, including application demonstrations. The symposia and their topical areas specifically are:

Structural Health Monitoring
Structural asset and life cycle monitoring; condition-based and predictive maintenance; damage detection; digital twin; digital thread and authoritative source of truth; product lifecycle management; industrial IOT; AI and machine learning; physics-informed machine learning; data analytics, data science and big data; wireless and remote monitoring; edge computing; distributed sensing; human performance monitoring; HSI.

Integrated System Design and Implementation
Adaptive/intelligent/integrated systems design; smart structures design processes and tools; smart devices and technologies; Emergent computing methods including morphological computation and physical reservoir computing; compliant mechanism design; Industrial and government smart products and system applications; sensors and actuators; power and control electronics; smart electronics and devices; MEMS.

Modeling, Simulation and Control of Adaptive Systems
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
Modeling and experiments of energy harvesting transducers and applied systems using piezoelectric and magnetostrictive materials; electroactive polymers; inductive and capacitive devices; MEMS and NEMS configurations; novel circuits and storage devices; novel applications/analysis of traditional transduction (e.g. solar, thermoelectric); energy harvesting using metamaterials.

Development and Characterization of Multifunctional Materials
Multifunctional material formulations, evaluation, synthesis, and processing; multifunctional composites and hybrid materials; bio-inspired and nanocomposites; self-healing, shape memory, electrostrictive and magneto- strictive materials; material property enhancement; interface and interaction science; data and AI/machine learning driven multifunctional materials.

Bioinspired Smart Materials and Systems
Convergent topics in engineering and biology; modeling and simulation of biological systems; biomechanics; biomimetic and bioinspired devices and materials; biomolecular assemblies, bioinspired or soft robotics; biohybrid or living machines; smart prosthetics and implants.

Mechanics & Behavior of Active Materials
Advanced constitutive measurements; micro/nano-mechanics of actuator & sensor materials; phase field modeling; multi-scale and multi-physics material models; numerical implementations; reliability issues: aging, fatigue, and fracture; energy storage materials; multiferroic materials.

Special Symposium: Embodying Physical Computing and Mechano-Intelligence
This special symposium focuses on the emerging topic of embodying physical computing and mechano-intelligence in adaptive structures and materials - an intriguing direction for future autonomous and intelligent engineering systems. The scope will be broad and at multiple scales, from autonomous materials with mechano-logic and mechano-computing power, to intelligent structural systems with learning, memory, and decision-making capabilities embedded in the mechanical domain.

SMASIS *in-action*

Hardware Showcase: All authors are invited to present physical demonstrators of their respective developments as part of the hardware showcase and compete for the best hardware award. The showcase runs throughout the conference and provides opportunities for technical discussions and networking.

Industry Forum: A dedicated industry forum is planned to get companies perspectives in the field represented even more. This forum will include an exhibition as well as dedicated sessions.

Student Activities: Student events at SMASIS 2026 will provide opportunities for technical communication, networking, and community outreach.