

Adaptive and active materials: Selected papers from the ASME 2011 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS 11) (Scottsdale, AZ, USA, 18–21 September 2011)

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## EDITORIAL

# Adaptive and active materials: Selected papers from the ASME 2011 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS 11) (Scottsdale, AZ, USA, 18–21 September 2011)

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The fourth annual meeting of the ASME/AIAA Smart Materials, Adaptive Structures and Intelligent Systems Conference (SMASIS) took place in sunny Scottsdale, Arizona. Each year we strive to grow and offer new experiences. This year we held a special Guest Symposium on Sustainability along with two focused topic tracks on energy harvesting and active composites to encourage cross-fertilization between these important fields and our community. This cross-disciplinary emphasis was reflected in keynote talks by Dr Wayne Brown, President and founder of Dynalloy, Inc., ‘Cross-Discipline Sharing’; Dr Brad Allenby, Arizona State University, ‘You Want the Future? You can’t Handle the Future!’; and Professor Aditi Chattopadhyay, Arizona State University, ‘A Multidisciplinary Approach to Structural Health Monitoring and Prognosis’.

SMASIS continues to grow our community through both social and technical interchange. The conference location, the exotic Firesky Resort and Spa, exemplified the theme of our Guest Symposium on Sustainability, being the only Green Seal certified resort in Arizona, and highlighting four elements thought to represent all that exist: fire, water, earth and air. Several special events were held around this theme including the night at the oasis reception sponsored by General Motors, sustainability bingo, smart trivia and student networking lunches, and an Arizona pow-wow with a spectacular Indian hoop dance. Our student and young professional development continues to grow strong with best paper and hardware competitions, scavenger student outing and games night. We are very proud that our students and young professionals are always seeking out ways to give back to the community, including organizing outreach to local high school talent. We thank all of our sponsors who made these special events possible. We hope that these social events provided participants with the opportunity to expand their own personal community and broaden their horizons.

Our ultimate goal was to provide a friendly, casual southwestern forum for the exchange of the ‘hottest’ ideas and latest results. Our sincere appreciation goes to all the presenters for choosing to share their very best work at this conference. SMASIS is divided into seven symposia which span basic research, applied technological design and development, and industrial and governmental integrated system and application demonstrations:

- SYMP 1 Multifunctional Materials;
- SYMP 2 Active Materials, Mechanics and Behavior;
- SYMP 3 Modeling, Simulation and Control;

- SYMP 4 Enabling Technologies and Integrated System Design;
- SYMP 5 Structural Health Monitoring/NDE;
- SYMP 6 Bio-inspired Smart Materials and Structures; and
- SYMP 7 Guest Symposium on Sustainability

Authors of papers in the materials area (symposia 1, 2 and 6) were invited to write a full journal article on their presentation topic for publication in this Special Issue of *Smart Materials and Structures*. This collection of papers demonstrates the exceptional quality and originality of the conference presentations. We appreciate their efforts in producing this collection of highly relevant articles on smart materials.