

# PROCEEDINGS OF SPIE

## ***Active and Passive Smart Structures and Integrated Systems 2008***

**Mehdi Ahmadian**

*Editor*

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**Friedrich K. Straub**, The Boeing Company (USA)  
**Jian Qiao Sun**, University of Delaware (USA)  
**Nader Vahdati**, Nanyang Technological University (Singapore)  
**Kon-Well Wang**, The Pennsylvania State University (USA)  
**Norman M. Wereley**, University of Maryland, College Park (USA)

#### Session Chairs

- 1 Energy Harvesting and Scavenging I  
**Henry A. Sodano**, Arizona State University (USA)  
**Gyuhae Park**, Los Alamos National Laboratory (USA)
- 2 Energy Harvesting and Scavenging II  
**Donald J. Leo**, Virginia Polytechnic Institute and State University (USA)  
**Henry A. Sodano**, Arizona State University (USA)
- 3 Energy Harvesting and Scavenging III  
**Nakhiah C. S. Goulbourne**, Virginia Polytechnic Institute and State University (USA)  
**Gyuhae Park**, Los Alamos National Laboratory (USA)
- 4 Advanced Materials and Structures  
**William W. Clark**, University of Pittsburgh (USA)  
**Kon-Well Wang**, The Pennsylvania State University (USA)
- 5 Automotive and Transportation Systems  
**Mehdi Ahmadian**, Virginia Polytechnic Institute and State University (USA)
- 6 SMAs Integrated Systems I  
**Mehdi Ahmadian**, Virginia Polytechnic Institute and State University (USA)  
**Mehrdad N. Ghasemi-Nejhad**, University of Hawai'i at Manoa (USA)
- 7 SMAs Integrated Systems II  
**Gregory P. Carman**, University of California, Los Angeles (USA)  
**Steve C. Southward**, Virginia Polytechnic Institute and State University (USA)

- 8 Smart Materials and Structures Optimization  
**Mehrdad N. Ghasemi-Nejhad**, University of Hawai'i at Manoa (USA)
- 9 Modeling, Simulation, and Design of Controlled Systems I  
**Mehrdad N. Ghasemi-Nejhad**, University of Hawai'i at Manoa (USA)
- 10 Smart Materials and Structures Optimization II  
**Daniel J. Inman**, Virginia Polytechnic Institute and State University (USA)  
**Mohammad Rastgaar Aagaah**, Virginia Polytechnic Institute and State University (USA)
- 11 MR Fluids Integrated Systems  
**Norman M. Wereley**, University of Maryland, College Park (USA)  
**Mehdi Ahmadian**, Virginia Polytechnic Institute and State University (USA)
- 12 Biology Inspired Systems  
**Ephrahim Garcia**, Cornell University (USA)  
**Donald J. Leo**, Virginia Polytechnic Institute and State University (USA)
- 13 Civil Systems  
**Seung-Bok Choi**, Inha University (South Korea)  
**Aditi Chattopadhyay**, Arizona State University (USA)
- 14 Integrated Systems in Bionics and Nature-Inspired Technologies  
**Yuji Matsuzaki**, Nagoya University (Japan)  
**Ephrahim Garcia**, Cornell University (USA)
- 15 Integration of Active/Passive Materials and Devices into Integrated Systems I  
**Mehrdad N. Ghasemi-Nejhad**, University of Hawai'i at Manoa (USA)  
**Eric H. Anderson**, CSA Engineering, Inc. (USA)
- 16 Integration of Active/Passive Materials and Devices into Integrated Systems II  
**Mehrdad N. Ghasemi-Nejhad**, University of Hawai'i at Manoa (USA)  
**Mohammad Rastgaar Aagaah**, Virginia Polytechnic Institute and State University (USA)
- 17 Active/Semi-Active/Passive Vibration Control  
**Joseph R. Maly**, CSA Engineering, Inc. (USA)  
**Nakhiah C. S. Goulbourne**, Virginia Polytechnic Institute and State University (USA)

- 18 Aircraft and MAV/UAV Systems  
**Pablo Bandera**, Honeywell, Inc. (USA)  
**Donald J. Leo**, Virginia Polytechnic Institute and State University (USA)
- 19 Modeling, Analysis, and Design of Structural Sensing and Actuation in Integrated Systems  
**Nakhiah C. S. Goulbourne**, Virginia Polytechnic Institute and State University (USA)  
**Mohammad Rastgaar Aagaah**, Virginia Polytechnic Institute and State University (USA)
- 20 Morphing Structures and Aircrafts  
**Nakhiah C. S. Goulbourne**, Virginia Polytechnic Institute and State University (USA)  
**Mehdi Ahmadian**, Virginia Polytechnic Institute and State University (USA)
- 21 Flexible Robotic Systems  
**Mohammad Rastgaar Aagaah**, Virginia Polytechnic Institute and State University (USA)