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Tribikram Kundu
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Tribikram Kundu, The University of Arizona (United States)
Wolfgang Grill, Universität Leipzig (Germany)
- 2 Guided Waves in Composites
Hoon Sohn, Korea Advanced Institute of Science and Technology (Korea, Republic of)
Francesco Lanza di Scalea, University of California, San Diego (United States)
- 3 Guided Waves for Large Structure Monitoring: Pipe, Rail, Ship, etc.
Francesco Lanza di Scalea, University of California, San Diego (United States)
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Hoon Sohn, Korea Advanced Institute of Science and Technology (Korea, Republic of)
Francesco Lanza di Scalea, University of California, San Diego (United States)
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Anthony J. Croxford, University of Bristol (United Kingdom)
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Won-Bae Na, Pukyong National University (Korea, Republic of)
Christopher Niezrecki, University of Massachusetts Lowell (United States)
- 12a Sensor Network
Victor Giurgiutiu, University of South Carolina (United States)
Daniel R. Osmont, ONERA (France)
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Paul Fromme, University College London (United Kingdom)

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Andrei N. Zagrai, New Mexico Institute of Mining and Technology (United States)
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Paul Fromme, University College London (United Kingdom)
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- 14a Civil Engineering Applications: Bridge Monitoring
Won-Bae Na, Pukyong National University (Korea, Republic of)
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Paul D. Panetta, Applied Research Associates, Inc. (United States)
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Daniel R. Osmont, ONERA (France)

Introduction

In the year 2001 the SPIE conference 4335 on health monitoring of structural and biological systems brought engineers, materials scientists, medical doctors, and biologists together to exchange their ideas on this important issue. After having a positive experience at that conference, yearly conferences were organized on the same topic and the next one has been planned for the year 2012. Proceedings volume 7984 contains papers presented at the 2011 conference. Papers presented in the earlier conferences can be found in Proceedings volume 4335 for 2001 papers, vol. 4702 for 2002, vol. 5047 for 2003, vol. 5394 for 2004, vol. 5768 for 2005, vol. 6177 for 2006, vol. 6532 for 2007, vol. 6935 for 2008, vol. 7295 for 2009, and vol. 7650 for 2010 papers.

The emphasis of this conference is to recognize that sensing by nondestructive evaluation, sensor array design, signal acquisition and transmission, signal processing, energy harvesting, etc., are integral parts of health monitoring for both structural and biological systems. I believe that biological and physical science communities are learning from each other by coming to this conference and exchanging ideas. Some of the recent advances in the science and technology of health monitoring techniques that go beyond the traditional nondestructive testing for internal flaw detection are presented in these proceedings. New diagnosis, prognosis and rehabilitation techniques applied to engineering structures made of metal, concrete, and composites, as well as biological systems, are presented. The papers published here cover a wide range of technologies. It is hoped that this conference will stimulate further interactions between physical and life science community resulting in newer development of more innovative techniques for health monitoring applications.

I am thankful to the conference cochair, program committee members, authors, session chairs, and the SPIE staff for putting together this excellent conference.

Tribikram Kundu