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Tribikram Kundu
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Introduction

In the year 2001 the SPIE Conference on Health Monitoring of Structural and Biological Systems brought engineers, materials scientists, medical doctors, and biologists together to exchange their ideas on this important topic. 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 2018. Proceedings Volume 10170 contains papers presented at the 2017 conference. Papers presented in the earlier conferences can be found in SPIE Proceedings Volumes 4335 (2001), 4702 (2002), 5047 (2003), 5394 (2004), 5768 (2005), 6177 (2006), 6532 (2007), 6935 (2008), 7295 (2009), 7650 (2010), 7984 (2011), 8348 (2012), 8695 (2013), 9064 (2014), 9438 (2015), and 9805 (2016).

The emphasis of this conference is to recognize that nondestructive sensing, 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 one another 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 communities resulting in newer development of more innovative techniques for health monitoring applications.

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

Tribikram Kundu