

# PROCEEDINGS OF SPIE

## ***Smart Sensor Phenomena, Technology, Networks, and Systems 2009***

**Norbert G. Meyendorf  
Kara J. Peters  
Wolfgang Ecke**  
*Editors*

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## Introduction

This volume is a collection of technical papers presented at the 2009 SPIE conference held in San Diego, California: the 16th International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring. These collected papers were given in the technical conference of Smart Sensor Phenomena, Technology, Networks, and Systems.

These contributions are unique in this emerging area because of their multidisciplinary representations in the field of optical and ultrasound sensors and applications, sensor networks, and different smart sensors for various applications like aerospace, mechanical engineering, and material characterization. Participants came from more than 12 countries in regions all over the world. As you'll find in the roster, members of the program committee represent the various fields of nondestructive evaluation, health monitoring, and smart sensors.

The technical conference included two excellent invited presentations:

“Calibration of fiber Bragg gratings for optical sensing (FIBOS) for an aerospace application” by Raquel L. López Heredero, Instituto Nacional de Técnica Aeroespacial (Spain), and

“Health monitoring network using smart sensor of elasticoluminescence” by Chaonan Xu, National Institute of Advanced Industrial Science and Technology (Japan)

The technical conference was divided into 10 topical sessions and one poster session. The papers in these sessions covered a wide range of topics: fiber Bragg grating sensors and applications, other optical sensors, sensor networks, smart sensors and ultrasound sensors.

We would like to thank authors and presenters of this year's conference for their contributions. The outstanding conference program was put together by the fine effort of the program committee and we are thankful to the members of the program committee for their contributions.

We are sure that readers will find this proceedings volume useful and informative.

**Norbert G. Meyendorf**  
**Kara J. Peters**  
**Wolfgang Ecke**

