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Introduction

This volume is a collection of technical papers presented at the 2007 SPIE Conference 6529 on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems. This conference was part of the SPIE International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring held 18 through 22 March 2007 in San Diego, California.

This conference is unique in the emerging area of sensors and smart structures technologies because of its multidisciplinary representations from the aerospace, civil, and mechanical engineering communities. Participants came from more than thirteen countries over the globe. The conference also served as the de facto grantees' conference of the Sensor Innovation and Systems (SIS) Program of the Civil, Mechanical, and Manufacturing Innovation (CMMI) Division of the National Science Foundation. The support and participation of the Asian-Pacific Network of Centers for Research in Smart Structure Technology (ANCRiSST) strengthened international participation. SISTeC at KAIST provided funds to support the participation of special invited participants. As you find in the roster of the program committee, members of the program committee represented the various fields of engineering.

The conference started with an invited session with two excellent presentations: "Sensors and actuators inherent in biological species," by Professor Minoru Taya, University of Washington, Seattle, et al., and "From photogrammetry, computer vision to structural response measurement" by Professor C. C. Chang, Hong Kong University of Science and Technology.

The opening plenary session was followed by twenty-nine topical sessions and one poster session. The papers in these sessions covered a wide range of topics in fiber optics and other novel sensors, structural health monitoring, signal processing, damage detection and assessment, wireless technologies, and modeling and analysis of smart systems. Research papers supported by the National Science Foundation SIS Program were presented at both respective topical sessions and the NSF poster session. Lively discussions among Dr. Shih-Chi Liu, CMMI Program Director in charge of SIS, principal investigators of the NSF projects, and other participants took place during the poster session.

In conjunction with the broad technical base of the current conference program and its objectives, it is apparent that we must continue to develop and build a large, diverse constituency. In light of the increased number of submissions to this conference that we witnessed in recent years, we are optimistic in this regard. 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 members for their contributions.

We trust that readers will find this conference proceedings volume useful and informative.

Masayoshi Tomizuka
Chung-Bang Yun
Victor Giurgiutiu