International Workshop on Structural Health Monitoring 2013

"A Roadmap to Intelligent Structures"

Stanford University, Stanford, CA
September 10-12, 2013

Major topics for the workshop include, but are not limited to:

Sensor, Actuator, Multifunctional Materials

- "Smart" sensors, new novel sensors, sensors for extreme environments, fiber optics, piezoelectrics, magneto-electric sensors, CNT sensors, nano-sensors, etc.

Sensor Network/System Integration

- Bio-inspired sensing networks, remote and wireless communication, self-diagnostic network, self-repairing and fault-tolerance network, advanced manufacturing for structures with built-in sensors, hardware/software integration, durability/reliability of sensors and sensor network systems, etc.

Signal Processing/Monitoring/Diagnostics

- Advanced signal processing, data mining/fusion, statistics-based signal processing methods, innovative environmental compensation techniques, baseline free methods, neural network techniques, machine learning techniques, inverse methods, etc.

Prognostics/Health Management/CBM+

- Quality control manufacturing, life prediction, integrated structural health management, SHM-based condition assessment of critical structures, etc.

Modeling/Simulations/SHM-based Design

- Global-local analyses, modeling of sensor/structural responses, manufacturing with sensor data, multifunctional design optimizations, SHM-based designs for structures with sensors, etc.

Implementation/Validation/Certification

- Quantification techniques, probability of detection (POD), reliability methods, validation/certification processes, etc.

Applications-
Manufacturing/Sustainability/Design/Intelligent Structures

- Civil infrastructures: Bridges, highway systems, buildings, power plants, underground structures, etc.
- Aircraft and missile structures: Rotorcraft, aircraft, unman vehicles (UAV), engines, rocket motor cases, etc.
- Space structures: Satellites, space stations, reusable launch vehicles, exploration vehicles, space robots, etc.
- Land/Marine/Offshore structures: Automobiles, trains, submarines, ships, offshore structures, etc.
- Medical devices: Implants, health monitoring devices, etc.

Theme of Workshop

The purpose of the workshop is to assess the current state-of-the-art technologies in this field and to discuss and identify key and emerging issues in research and development that are critical and unique in structural health monitoring. The workshop is also intended to promote communication exchange and cross-fertilization between multiple disciplines.

Technical presentations will be made by invited and selected distinguished speakers, and plenary discussions on the future direction and the "road-map" will be organized. Potential applications of the techniques to military and civilian structures will be discussed. An exhibition area will be available for product and technology demonstrations.

Time Table

Website opens for abstract submission	October 15, 2012
Abstract due (extended)	February 15, 2013
Acceptance notification by	March 10, 2013
Full length paper due	May 1, 2013
Workshop	Sept. 10-13, 2013

Abstract

Please send a succinct one-page abstract that clearly describes the contents of the proposed paper. **Online abstract submission starts on October 15, 2012**. A complete abstract should include the following:

- Title
- Author's name, affiliation, title, address, phone number, fax number, and e-mail address (e-mail is very important)
- Abstract (300 words minimum) and key figure(s).

For further information, please visit:
http://structure.stanford.edu/workshop/submission.html

A special volume of the Proceedings will be published.
For any further information, please check the workshop website at http://structure.stanford.edu/workshop or contact

Prof. Fu-Kuo Chang (Workshop Organizer) at
Department of Aeronautics and Astronautics
Stanford University, Stanford CA 94305
fkchang@stanford.edu
Tel: (650) 723-3466, Fax: (650) 725-3377
Or contact
Prof. Alfredo Guemes (Co-Organizer) at
ETSI Aeronautics
Madrid, Spain
aguemes@dmpa.upm.es
Tel: 3491-336-6327