

## IWSHM 2015

Stanford University, Stanford, CA  
September 1-3, 2015

### Call for Papers

You are cordially invited to submit your abstract proposal to contribute to the *IWSHM 2015*.

This 10<sup>th</sup> IWSHM will feature reviews of SHM growth in the last two decades and the perspectives of future SHM directions in research and applications. Applications on energy industries such as oil platforms, wind farms, and nuclear power plants will be highlighted besides general applications in aerospace and civil infrastructure.

The biennial workshop aims to assess the state-of-the-art technologies in the field, and to discuss and identify key and emerging breakthroughs and challenges 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. A special volume of the Proceedings will be published with all the accepted papers.

For detailed guidelines on abstract submission, please visit [submission.iwshm.org](http://submission.iwshm.org)

### Key Dates

The website is now open for abstract submissions.

Abstract Submission Deadline	February 1, 2015
Notification of Acceptance	March 1, 2015
Final Paper Submission Deadline	May 1, 2015
Workshop	Sept. 1-3, 2015

For more information, please visit our website

[www.iwshm.org](http://www.iwshm.org)

or contact

**Prof. Fu-Kuo Chang** (Workshop Organizer) at  
Department of Aeronautics and Astronautics  
Stanford University, Stanford CA 94305  
[fkchang@stanford.edu](mailto:fkchang@stanford.edu)  
Tel: +1-650-723-3466, Fax: +1-650-725-3377

**Prof. Alfredo Guemes** (Co-Organizer) at  
E.T.S.I. Aeronáuticos, UPM, Madrid, Spain  
[aguemes@dmpa.upm.es](mailto:aguemes@dmpa.upm.es)  
Tel: +34-91-336-6327

### Major Topics

#### Sensors/Actuators

- Novel sensors, sensors for extreme environments, fiber optics, piezoelectric, magneto-electric sensors, CNT sensors, micro/nano-sensors, etc.

#### Sensor Networks/System Integration

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

#### Multifunctional Materials and Structures

- Self-sensing materials, energy harvesting and storage, structures with state awareness, fly-by-feel UAVs

#### Signal Processing/Monitoring/Diagnostics

- Advanced signal processing, statistical signal processing, data mining/fusion, innovative environmental compensation methods, baseline free methods, neural networks, machine learning, 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, multiobjective design optimization, SHM-based design, etc.

#### Implementation/Validation/Certification

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

#### Applications: Manufacturing/Sustainability/Design/Intelligent Structures

- Civil infrastructure: Bridges, highway systems, buildings, power plants, underground structures, etc.
- Aircraft and missile structures: Rotorcraft, aircraft, UAVs, drones, 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.