

## SHM in Action

Location: Memorial Auditorium

Date: September 14th, 2011

Company/ Institution	Logo	Description of Demonstration
Acellent Technologies Inc.		Acellent will demonstrate the wireless multifunctional sensing capabilities of SMART Layer technology, including impact monitoring, damage detection, and structural state sensing. This unique demonstration will be performed in real-time on a real world structure showcasing our remote monitoring capabilities.
Advitam		Advitam will demonstrate bridge health monitoring system that was installed back in 2004 on the Rion-Antirion ( <a href="http://en.wikipedia.org/wiki/Rio%E2%80%93Antirrio_bridge">http://en.wikipedia.org/wiki/Rio%E2%80%93Antirrio_bridge</a> ).
Critical Materials		Demonstration of PRODDIA® software platform focused on the continuous evaluation of material condition and structural integrity of critical components. Demonstration includes 3 minutes demo of the software workbench with a case study and 2 minutes video showing PRODDIA main features and other results.
Georgia Institute of Technology		A 5-min video will be presented on our latest research exploiting mobile sensor networks for SHM. Integrating mobility with sensing nodes resolves some most critical challenges faced by current static wireless sensor networks. Multiple mobile sensing nodes form an organic mobile sensor network that can search for potential structural damage.
Katholieke Universiteit Leuven		A live-demonstration of a percolation sensor for detecting the presence of corrosive liquids in floor beam/seat track structure of airplanes.
Metis Design Corporation		MDC plans to demonstrate real-time damage detection on representative composite structure using 3 sensor node digital sensor network to cover the large specimen (over 1 m <sup>2</sup> ), data will be wireless transferred to a laptop for fast visualization of the damage. Single as well as multiple damage events introduced simultaneously.
Mistras Group, Inc		The 4-channel Acoustic Emission wireless node is designed as a local area monitoring system capable of detecting damage onset or progression such as crack growth, active corrosion, delamination formation in composites, impact damage, etc.
National Instruments		National Instruments would demonstrate a new low-power wireless sensor device for strain gages and show the programming of the intelligent wireless device for local data processing of strain data using LabVIEW.

<p>Princeton University</p>	<p><b>PRINCETON UNIVERSITY</b></p>	<p>Demonstrating Bridge Health Monitoring system to show live measurements to the audience and also show the “Playback” software for analysis of events showing important loading in the form of heavy truck and related deformation captured by cameras and sensors.</p>
<p>Structure Inspection and Monitoring, Inc</p>		<p>Demonstrates the development of SIM Diagnostic Software, as part of Bridge Health monitoring system, to exploit the capabilities of smart sensors where the cost of data communications may be a major portion of the cost. The software reports data summaries on an exception basis to help engineers track changes not predicted from the latest model estimate stored at the data center</p>