



NIWeek 2014: Jacobs and National Instruments Structural Testing Demo System

National Instruments offered Jacobs a spot within a keynote address at their annual conference, known as NIWeek, which was held in Austin, Texas on August 4-7, 2014. NIWeek typically draws as many as 4,000 attendees.

As part of NIWeek 2014, Jacobs built a small version of a structural test stand. The stand includes a model airplane instrumented with load cells, accelerometers, and strain gages. The demonstration uses Jacobs' Test SLATE software to provide supervisory control and data acquisition.

The airplane wings are attached to actuators, which stress the wings. The actuators and sensors on the fixture are connected to a PXI chassis that includes NI's VeriStand (in RT mode) for closed loop control and high speed acquisition.

Jacobs incorporated an NI Universal Bridge Module. By switching it in the circuit as a substitution for a sensor, the electronics downstream of the sensor can be checked or calibrated. This is referred to as a voltage insertion calibration. With this, Test SLATE can quickly step through channel-by-channel for hundreds or thousands of channels and validate the required measurement uncertainty.

For more information about Test SLATE, visit www.jacobs.com or call 931-393-6630.

