

## NIDays 04-05 Sessions

Session	Description
<b>Essential Technologies for Mixed Signal Test</b>	Explore the essential technologies for design and test in the consumer electronics industry through technical solution demonstrations and industry case studies. Learn how to use these essential technologies to accelerate product development and address the globalization of design and manufacturing. Discover what software and high-performance modular hardware is being utilized to manage the complexity of new designs and converging technologies. Demonstrations highlight test scenarios for consumer electronics, communications, and design and validation.
<b>Introduction to Signal Express</b>	NI SignalExpress is a new, interactive software for acquiring, comparing, automating, and storing electronic measurements in design and validation testing applications. With SignalExpress, you can simplify your exploratory and automated measurement tasks with a drag-and-drop configuration-based environment that removes the requirement to develop code. Access your measurements quickly using built-in steps for signal acquisition, processing, time and frequency domain analysis, and file I/O. This session will cover a variety of real-world demonstrations and explain how you can create user-defined steps for SignalExpress using NI LabVIEW to extend the functionality of the interactive environment.
<b>Managing Ultrahigh-Density Switch Systems with NI Switch Executive</b>	Attend this session to see how the latest NI Switch Executive features simplify the configuration and programming of ultrahigh-density switching applications. We demonstrate setting up IVI switches in Measurement and Automation Explorer, configuring channels, creating hardwires and route groups, and validating your entire switch application.
<b>PXI and LabVIEW Your Platform for Test, Control, and Design Applications</b>	National Instruments LabVIEW and PXI define the measurement and automation platform standards for next-generation test systems. The superior software advantage of NI LabVIEW combined with the widest selection of PXI measurement hardware, including data acquisition, instruments, vision, and motion, deliver high-performance virtual instrumentation systems at an affordable price. Learn why the Royal Australian Air Force Black Hawk program and Microsoft's Xbox initiative standardized on the industry-leading platform of LabVIEW and PXI. PXI resources, including PXI vendor information and the 2004 PXI Product Resource Guide, are distributed to all session attendees.
<b>Using LabVIEW and PXI for End-to-End Digital Communication Link Testing</b>	Design and test components and subsystems in an end-to-end digital communication link using National Instruments LabVIEW, an NI RF signal analyzer, and the new NI RF vector signal generator. With this modular hardware-flexible software architecture, you can reduce development time and seamlessly transition your design from development to manufacturing. During this presentation, learn how you can use features such as the ability to design custom modulation schemes, target algorithms to embedded platforms such as FPGA, add unique measurement and visualization capabilities, ensure tight timing and triggering control among I/O devices, and integrate with tools such as Ansoft Designer.
<b>Building Rugged Industrial Machine Control Systems with CompactRIO</b>	This session will introduce a reliable real-time embedded control reference design example and provide tips and tricks for creating rugged, reliable, and low cost machine control systems using NI CompactRIO. This session will explain how the unprecedented flexibility and open access to low-level hardware capabilities of CompactRIO enable you to replace costly custom circuit designs and create complete stand-alone embedded control systems while performing both hardware and software design in LabVIEW. We will discuss how to partition your control application between the RIO FPGA and the real-time controller. Topics include single-point control, FPGA-based PID, parallel logic, redundancy, motion control, and interfacing to industrial sensors/actuators.

<b>Intro to LabVIEW Control Design and Simulation Tools</b>	<p>Come and see the new LabVIEW tools for system identification, control design, and simulation. During this session, we will demo the new tools and show how you can use them to build custom control algorithms from standard PID control algorithms to complex control algorithms. Learn how these new tools can be used with existing NI hardware and software such as LabVIEW Real-Time to <u>implement real-time control systems</u>.</p>
<b>What's New LV 7.1</b>	<p>In this session, we present and demonstrate the latest additions to LabVIEW. This session will show <u>features for new LabVIEW users, as well as advanced LabVIEW programmers.</u></p>