QNET: EXPERIMENTS TO TEACH FUNDAMENTALS OF CONTROLS AND MECHATRONICS

QNET is a series of six experiments that are designed exclusively for the National Instruments Educational Laboratory Virtual Instrumentation Suite (NI ELVIS). Extending the functionality of NI ELVIS and NI LabVIEW™ through six training boards, the QNET experiments are an effective tool for teaching controls fundamentals in various engineering disciplines including electrical, mechanical, mechatronics, aerospace and biomedical. Comprehensive pedagogical curriculum is provided with all QNET experiments to save educators considerable time while enabling students to cultivate a deep understanding of engineering principles. With QNET hardware-in-the-loop implementations, engineering students can get hands-on, practical experience in the important aspects of engineering practice. These include control, design and simulation. This spurs student interest, motivation and enhances the laboratory experience.

NI ELVIS is an educational design and prototyping platform, tightly integrated with LabVIEW, which is ideal for teaching introductory engineering concepts including control, design and simulation.

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To request a demonstration or quotation, please visit www.ni.com/quanser
BRING ADVANCED MECHATRONICS TO YOUR LAB WITH LABVIEW™ AND QUANSAER TECHNOLOGY

While the QNET series for NI ELVIS provides a cost-effective solution for teaching introductory control and mechatronics principals, you can leverage the National Instruments™ educational platform for advanced teaching and research. LabVIEW™ software and a wide range of National Instruments™ hardware is fully compatible with Quanser control experiments for intermediate and advanced level teaching and research. Quanser experiments cover topics applicable to various engineering disciplines such as electrical, mechanical, mechatronics, aerospace and civil. From rotary to linear and to more advanced, Quanser experiments are distinctively modular. This enables labs to maximize the investment in National Instruments™ technology and cost-effectively employ the same power plant and data acquisition card to perform experiments of varying complexity.

Easy integration with National Instruments™ hardware provides many options for prototyping, hardware-in-the-loop tests, and final implementation. By combining these tools with the LabVIEW™ Control Design and Simulation Module, students can take advantage of custom algorithm development, analysis and visualization. Plus you can integrate LabVIEW™ Real-Time and LabVIEW™ FPGA software and hardware to integrate a single platform for easily and quickly designing, prototyping, and deploying your systems. National Instruments multifunction data acquisition and field-programmable gate array-enabled I/O devices combine analog input, analog output, digital I/O, and counter/timers on a single device. With new, innovative analog and digital designs, M Series and X Series devices set a new standard for performance, I/O capability, safety, and value. NI R Series multifunction RIO devices offer the best combination of value and performance by integrating field-programmable gate array (FPGA) technology with analog and digital I/O into a single device that is offered on standard PC form factors. Please visit www.quanser.com for a detailed list of National Instruments™ cards that are compatible with Quanser experiments.

About Quanser:

With 20 years in control design, Quanser is the world leader in education and research for real-time control design and implementation. We specialize in outfitting engineering control laboratories to help universities captivate the brightest minds, motivate them to success and produce graduates with industry-relevant skills. Universities worldwide implement Quanser’s open architecture control solutions, industry-relevant curriculum and cutting-edge workstations to teach introductory, Intermediate or Advanced controls to students in Electrical, Mechanical, Mechatronics, Robotics, Aerospace, Civil, and various other engineering disciplines. Quanser educational solutions are fully compatible with:

See the full range of mechatronic controls experiments for LabVIEW™ and National Instruments hardware at www.quanser.com/nimcc

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