

## **REAL-TIME DIGITAL SIMULATION OF CONTROL SYSTEM WITH LABVIEW SIMULATION INTERFACE TOOLKIT AND SIMULATION MODULE**

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### **ABSTRACT**

In this paper, the virtual instruments software Lab VIEW and its Simulation Interface Toolkit are introduced at first. With visualization technology, Lab VIEW can simulate an industry plant with better effect. The Lab VIEW Simulation Interface Toolkit (SIT) provides a seamless integration between MATLAB/ Simulink software and Lab VIEW. A method is presented to implement real-time digital simulation with no hardware-in-the-loop and a pure software real-time digital simulation example of a Performance comparison between Single loop and Cascade Control of Super Heated Steam Temperature System using analog Controllers using Lab VIEW Simulation Interface Toolkit is given. It can get better effect in teaching or training of industry process control system with minimal cost.

**KEYWORDS:** Lab VIEW Simulation Interface Toolkit, Real-Time, Digital Simulation, MATLAB