

# **System Design Challenges for Next Generation Wireless and Embedded Systems**

David Fuller

National Instruments

## **Abstract:**

Application demands in our embedded world are growing dramatically. Consumer expectations and the industry's forward-looking technology roadmaps paint a picture of a connected world full of intelligent devices once thought to have fixed functionalities.

Researchers exploring next generation wireless systems, Internet of Things (IOT), and even machine-to-machine (M2M) communications face many challenges in making this vision a reality. Where once a single, isolated design flow addressed the discrete application, heterogeneous multi-processing architectures must be considered and embraced along with the connections to other devices and systems, and real-world sensor data.

As the systems grow in complexity, new design approaches must also be developed and employed to expedite the research, design, and development cycle.

David Fuller will outline challenges system designers face in developing cyber-physical systems and explore a graphical system design approach that includes hardware abstraction and comprehends a heterogeneous multiprocessing environment while embracing different models of computation. Through this new approach, system designers can shorten design cycles and the time to prototype ultimately accelerating deployment.