



Dear Colleagues,

We are pleased to invite you to participate in an upcoming National Science Foundation sponsored workshop entitled **"Workshop on Cyber-Physical Approaches to Wind Tunnel Testing"**. The one-day workshop will be held April 23rd, 2019 at the NHERI Experimental Facility (EF) at the University of Florida in Gainesville, FL. All sponsored participants should plan to arrive by 8 am and stay until 5 PM on the 23rd.

This workshop will bring together a diverse group of researchers to discuss the challenges and opportunities for real-time hybrid simulation and related cyber-physical experimental methods as applied to wind engineering. Cyber-physical experimental methods such as hybrid simulation and real-time hybrid simulation were established in the civil engineering sphere through earthquake engineering applications. These experimental methods link together physical specimens and computational models to evaluate the performance of complex systems in a realistic and cost-effective framework. Experimental wind engineering can similarly benefit from this partitioning of a system into cyber and physical components. For example, in wind engineering, wind-induced loads and aeroelastic effects are difficult to model using computational methods, additionally, mass, stiffness and damping can be difficult to scale in aeroelastic wind tunnel specimens. To address these challenges, wind tunnel testing can be coupled with detailed numerical models of structure's dynamics, i.e., aeroelastic real-time hybrid simulation. Through discussions and breakout sessions, this workshop will identify the current state-of-the-art in experimental methods as applied to wind engineering and explore how new methods can address open challenges in wind engineering. Facilities, equipment, and algorithm development to support these methods will be discussed.

Sincerely yours,

Workshop Steering Committee:

Steve Wojtkiewicz, Clarkson University
Rich Christenson, University of Connecticut
Brian Phillips, University of Maryland
Jennifer Bridge, University of Florida



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