

# Dependable Cyber-Physical Systems

Edward A. Lee

Electrical Engineering and Computer Sciences Department  
U.C. Berkeley

**Abstract.** Cyber-physical systems are integrations of computation, communication networks, and physical dynamics. Applications include manufacturing, transportation, energy production and distribution, biomedical, smart buildings, and military systems, to name a few. Increasingly, today, such systems leverage Internet technology, despite a significant mismatch in technical objectives. A major challenge today is to make this technology reliable, predictable, and controllable enough for "important" things, such as safety-critical and mission-critical systems. In this talk, I will analyze how emerging technologies can translate into better models and better engineering methods for this evolving Internet of Important things.

Proceedings of SETTA 2016  
Symposium on Dependable Software Engineering  
Theories, Tools and Applications  
Beijing, China, Nov. 9-11, 2016