

Formal Methods and Future Systems Engineering

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Abstract. Formal methods have traditionally focussed on the modelling, verification and validation of computation and communication processes, and on the dependability of digital systems. However, the rise in networked and embedded processors and Internet of Things technology means that we must look beyond the formalisms of classical computer science to consider how our research results impact on the engineering of systems in the physical world. This entails more than just integrating discrete-event and continuous-time models: it means working across established discipline boundaries to develop formal methods and for the next generation of systems engineering. In this short talk, we will consider the role of the formal methods researchers in this future environment, and the skills they will need beyond the doctorate.