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**Thoughts on Cyber-Physical Systems at Small and Large Scales**

Cyber-physical systems range in size from small digital control systems to global scale, Internet-driven control of large physical systems. We will start with some thoughts on the nature and direction of this new field. We will then review some of our work on cyber-physical systems. At the small scale, joint work with Zhang, et al. produced some initial results on the relationship between stability of control systems and the schedulability of the digital controllers that implement the control laws. At the other end of the scale spectrum, work with Tariq and Grijalva has developed a middleware architecture for the control of large numbers of energy consumers and producers in the emerging smart energy grid.