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Title: Analysis and Control of Networked Embedded Systems

Abstract: The architecture of embedded systems has changed over the years as technological advances made it possible to integrate increasingly complex subsystems. Together with the opportunities offered by the wealth of sensing devices, the communication devices and the increasing computing power of control nodes, come tough challenges: control theory was based on mathematical paradigms that do not consider the non-idealities introduced by hardware and software devices, and communication protocols. When a control system is subject to non-idealities of the implementation and communication infrastructures, operative systems and communication protocols need to be considered in the design of the control policy. In this talk, we address analysis and control of Networked Embedded Systems by considering non-idealities introduced i) by computing and hardware devices, and ii) by network and communication protocols.