Abstract:

Model predictive control (MPC) has become of the most popular control techniques due its flexibility. Issues such as constraints on the control problem variables, delays in the system dynamics, and multiple objectives can be handled explicitly in the MPC framework. The evolution of computer, information and communication technologies has motivated the application of MPC to problems beyond its scope years ago and the development multiple noncentralized MPC approaches. The goal of this talk is to present a coherent and easily accessible overview regarding model predictive control and some of the latest developments regarding its application to systems of systems, including topics such as coalitional control and cybersecurity.