



Einladung zum Oberseminar Wissenschaftliches Rechnen

Julius-Maximilians-Universität Würzburg
Lehrstuhl für Wissenschaftliches Rechnen IX

Prof. Dr. Lars Grüne

Chair of Applied Mathematics, University of Bayreuth

Stabilizing and economic MPC without terminal constraints

Model predictive control (MPC) is a by now well established online optimization method for the control of linear and nonlinear systems. In this talk, we re-interpret MPC as a method to compute approximate solutions to infinite horizon optimal control problems by solving a sequence of finite horizon optimal control problems. We discuss approximation results for two different settings: For stabilizing problems, in which the cost functional penalizes the distance of the state to a desired set point or reference solution, we review results for the approximation property obtained during the last five years. For more general cost functionals - usually termed “economic MPC” in the MPC literature - we present some recent (and less elaborated) approximation results for infinite horizon optimal control problems which exhibit an optimal steady state.

Ort: Raum 30.02.003 (2. Stock) (Mathegeb. 30 West) Zeit: Montag, 05.12.2011, um 16.15 Uhr

Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Prof. Dr. Alfio Borzi

gez. Prof. Dr. Bastian von Harrach