Closing of the HD-MPC workshop

Milan, Italy, August 28, 2011
Website of HD-MPC project: http://www.ict-hd-mpc.eu

Slides of this workshop:
or via HD-MPC website → Events
Two special sessions on HD-MPC organized by Bart De Schutter and Alfredo Núñez:

- **MoA12 (10.00–12.00):** Hierarchical and Distributed Model Predictive Control – I. Fundamentals
- **MoB12 (13.30–15.30):** Hierarchical and Distributed Model Predictive Control – II. Applications

- **Room:** Vito
- **Presenters from HD-MPC and other FP7 EU projects (WIDE, HYCON2, Embocon, MoVeS)**
• Feasible-cooperation distributed model predictive control scheme based on game theory
  by Valencia, Espinosa, De Schutter, Staňková

• A dual decomposition-based optimization method with guaranteed primal feasibility for hierarchical MPC problems
  by Doan, Keviczky, De Schutter

• Distributed model-predictive control driven by simultaneous derivation of prices and resources
  by Scheu and Marquardt

• Distributed non-cooperative MPC with neighbor-to-neighbor communication
  by Farina and Scattolini

• Adjoint-based distributed multiple shooting for large-scale systems
  by Savorgnan, Kozma, Andersson, Diehl

• Distributed model predictive control and estimation of large-scale multi-rate systems
  by Roshany-Yamchi, Negenborn, Cychowski, Connell, Delaney
Presentations in Session II – Applications

- Distributed MPC for multi-zone temperature regulation with coupled constraints
  by Moroșan, Bourdais, Dumur, Buisson

- Coordination of a multiple link HVDC system using local communications based distributed model predictive control
  by Mc Namara, Negenborn, De Schutter, Lightbody

- Hierarchical control with prioritized MPC for conflict resolution in air traffic control
  by Chaloulos, Hokayem, Lygeros

- Fixed-profile load scheduling for large-scale irrigation channels
  by Li and De Schutter

- Decentralised MPC based on a graph partitioning approach applied to the Barcelona drinking water network
  by Ocampo-Martinez, Puig, Bovo

- Cooperative distributed MPC for tracking
  by Ferramosca, Limón, Rawlings, Camacho
• Special Issue on Hierarchical and Distributed Model Predictive Control


• Currently 2 papers in top-10 of most downloaded papers:
  • A comparative analysis of distributed MPC techniques applied to the HD-MPC four-tank benchmark by Alvarado et al.
  • Decentralized model predictive control of dynamically coupled linear systems by Alessio et al.
ADHS’12: 4th IFAC Conference on Analysis and Design of Hybrid Systems
Eindhoven, The Netherlands, June 6–8, 2012
Topics:
- modeling, simulation, analysis, verification, and control of hybrid systems
- applications in networked control systems, large-scale process industries, transportation systems, energy distribution networks, communication networks, etc.

URL: www.adhs12.org
Submission deadline: Nov. 15, 2011