3rd IFAC Conference on Analysis and Design of Hybrid Systems 2009

Zaragoza, Spain
16-18 September 2009

Editors:

Alessandro Giua   **Manuel Silva**
Cristian Mahulea   **Janan Zaytoon**

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Printed by Curran Associates, Inc. (2010)

For permission requests, please contact the publisher, International Federation of Automatic Control (IFAC)
at the address below.

IFAC Secretariat
Schlossplatz 12
A-2361 Laxenburg
Austria

Phone: +43 2236 71 447
Fax: +43 2236 72 859

secretariat@ifac-control.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

CONTENTS

Optimal Control

Chairs: *Christos Cassandras and Naly Rakoto*

Hybrid Industrial Control

Organizer and chair: *César de Prada*

Reachability Analysis of Hybrid Systems under Uncertainty

Organizers: *Manuela Bujorianu and John Lygeros*
Chairs: *Manuela Bujorianu and Joerg Raisch*

Stability, Stabilization and Performance Analysis

Chairs: *Alfonso Baños and Cristian Mahulea*

VSS Methods for Control and Observations of Hybrid Systems (I): *Homogeneous higher order sliding mode finite time exact control and observation*

Organizer: *Leonid Fridman*
Chairs: *Leonid Fridman and Arie Levant*

Keynote paper 2

Chair: *Alessandro Giua*

Model-based Design of Hybrid Control Systems: Tools, Formalisms, and Tool Interconnection

Organizers: *C. Sonntag, S. Engell, and D.A. van Beek*
Chairs: *S. Engell and D.A. van Beek*

Optimization of Hybrid Dynamical Systems

Organizer: Yorai Wardi
Chairs: Manuel Silva and Yorai Wardi

Reachability and Verification

Chairs: Jean-Jacques Lesage and Stefan Ratschan

Optimization

Chairs: Peter Caines and Olaf Stursberg

Modelling, Simulation and Behaviours

Chairs: Jorge Júlvez and Jan H. Van Schuppen

VSS Methods for Control and Observations of Hybrid Systems (II): *VSS methods for control and observations of hybrid systems*

Organizer: *Leonid Fridman*
Chairs: *Leonid Fridman and Wilfrid Perruquetti*

Keynote paper 3

Chair: *Janan Zaytoon*

Robust Control

Chairs: *Jamal Daafouz and Janan Zaytoon*

Identification and Estimation

Chairs: *Thierry Floquet and Alessandro Giua*