

Report of the IEEE CSS on CACSD

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Here is a summary of the activities of the TC during the first semester of 2007.

*** Meetings ***

The next meeting of the TC is planned for Tuesday 26 June 2007 from 11:00 to 12:40 during the IFAC Symposium on Automatic Control in Aerospace, in Toulouse, France. This a joint meeting with the IFAC TC 2.1 (Control Design) chaired by Patrizio Colaneri.

*** New action group ***

Definition of a new AG on Periodic Systems and Control: following requests and suggestions from some colleagues active in this area and the approval of the TC Chair, some activities have been started in order to set up a WG covering various aspects of theoretical and applied research work involving dynamic models of signals and systems with periodic dynamics as well as the associated control system analysis and design issues. A web site for the AG is currently being developed and should be ready by the time of the next TC meeting. It will also be advertised at the 2007 IFAC Workshop on Periodic Systems and Control. For more information, contact Marco Lovera <lovera@elet.polimi.it>

*** New technical committee **

Ivan Markovsky and Paolo Rapisarda (AG on numerical methods in the behavioral setting) informed me that a new TC on behavioral systems and control theory (chaired by Paolo Rapisarda) has been officially approved during the meeting of the Board of Governors of the IEEE CSS of June 13, 2006. The activities of the TC will be coordinated and organized by a number of core members, responsible for the dissemination of information related to specific areas of behavioral system theory. See <http://www.ecs.soton.ac.uk/~pr3/IEEEETC.html>

*** Webpage developments ***

The webpage of the AG on numerical methods in the behavioral setting has moved (because of the move of Ivan Markovsky to a new position at the University of Southampton). The new address is: <http://www.ecs.soton.ac.uk/~im/aghhomepage.html>

*** Software developments ***

During a visit at LAAS-CNRS in Toulouse, Michal Kvasnica (Slovak Technical University in Bratislava) presented various features of the Multi Parametric Toolbox (MPT) for Matlab, a free software for design, analysis and deployment of optimal controllers for constrained linear, nonlinear and hybrid systems. Efficiency of the code is guaranteed by the extensive library of algorithms from the field of computational geometry and multi-parametric optimization. For more information, see <http://control.ee.ethz.ch/~mpt>

The new version 3 of GloptiPoly (moments, optimization and

semidefinite programming) by Didier Henrion, Jean-Bernard Lasserre and Johan Lofberg, is available for download at <http://www.laas.fr/~henrion/software/gloptipoly3>

*** Conferences ***

Pieter Mosterman (AG on hybrid dynamical systems) co-organized the Computer Automated Multiparadigm Modeling workshop. He is organizing a workshop on "Multiparadigm Modeling: Concepts and Tools" at the 2007 ACM/IEEE conference MoDELS. He is a keynote speaker at the 2007 IEEE MSE: <http://www.mseconference.org/program07.htm>

Harry Trentelman (University of Groningen) organized an invited session on behavioral system theory at the European Control Conference ECC'07, Kos, Greece.

Organisation by Marco Lovera (AG on Periodic Systems) of the CACSD track of the 2008 IEEE Multiconference on Systems and Control (MSC). The first meeting of the Organising Committee for MSC 08 has taken place during the 2006 IEEE CDC in San Diego. Current work is aiming at defining the composition of the International Program Committee for CACSD and at finding suitable candidate for the plenary and keynote talks (to be finalised at 2007 ACC in New York).

*** Journals, books ***

Ivan Markovsky, Sabine Van Huffel, Richard J. Vaccaro, and Torsten Soderstrom edited a special issue of Signal Processing on "Total Least Squares and Errors-in-Variables Modeling" to appear in 2007.

Peter Benner, Daniel Kressner, and Vasile Sima (AG on numerics) wrote a chapter intitled "The SLICOT Toolboxes - a Survey" for the book "Introduction to Advanced Scientific Softwares and Toolboxes", to be published by the International Association of Engineers.