Report of the IEEE CSS TC on CACSD

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Here is a summary of the activities of the TC

during the first semester of 2009.

\*\*\* Restructuring the TC on CACSD \*\*\*

I will step down from my position of Chair of the TC on CACSD following

the MSC 2010 in Japan. I am happy to propose the name of Fabrizio Dabbene

(Politecnico di Torino, Italy) for the position of Vice-Chair of the TC,

with the objective of ensuring a smooth transition: Fabrizio is expected

to take over the position of Chair of the TC on CACSD during the MSC 2010.

With Fabrizio we are currently thinking about restructuring the TC, also

in collaboration with Graziano Chesi (Univ. Hong Kong) who is simultaneously proposing a new TC on Systems with Uncertainty. Written

joint proposals have been submitted to the CSS board, and they will be

discussed during the next American Control Conference. The proposals

include the idea of joining forces in creating a novel event (symposium)

inside the MSC.

\*\*\* Publications \*\*\*

A column on activities of the TC on CACSD, edited by Sam Ge (CSS VP for

Technical Activities), has been submitted for publication in the

IEEE Control Systems Magazine.

A special issue of the IEEE Transactions on Automatic Control on

Positive Polynomials in Control, edited by G. Chesi and myself,

is scheduled to appear soon.

\*\*\* Software \*\*\*

A new version 2.0 of the package HIFOO for H-infinity fixed-order

optimization will be posted soon at

http://www.cs.nyu.edu/overton/software/hifoo/

This update, developed by Marc Millstone (New York Univ.) and Suat

Gumussoy (Kath. Univ. Leuven) jointly with Michael Overton (New York

Univ.) and myself, deals with multiobjective control problems including

simultaneous stabilization and strong stabilization, the main feature

being the possibility of designing a controller of order fixed from the

outset. I will present HIFOO 2.0 during the IFAC Symposium on Robust

Control Design, Haifa, Israel in June 2009.

Vasile Sima informed me that the Subroutine Library for Control Theory

(SLICOT) has been updated with routines for solving Hamiltonian

eigenproblems, exploiting the structure, and with complex versions for

calculations of poles and zeros of linear multivariable systems. Several

improvements have also been performed. Moreover, executables for MATLAB

2008a, 2008b, and 2009a have been added.

\*\*\* Next meeting \*\*\*

I am planning a meeting of the TC during the European Control Conference,

23-26 August 2009, Budapest, Hungary