Report of the IEEE CSS on CACSD

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Most members of the TC on CACSD met at a special meeting during

the joint CDC-ECC in Seville in Dec. 2005. Here is a summary

of the activities of the TC during the first semester of 2006:

- The Release 5.0 of the SLICOT Library for control theory

computations, posted on the Web site http://www.slicot.de,

has been updated. The changes involve improvements of several

routines and MEX-files, and bug fixes for some components.

Also, the Web site organization has been modified for an

easier access to public files. New routines will be added

at the next update.

- A new version of the Behavioral Toolbox is under development by

Ricardo Zavala Yoe, Harry Trentelman, and Kees Praagman, see

http://www.math.rug.nl/~trentelman/jacob/BTB/download.html

- Release of the first version of RoMulOC "Robust Multi-Objective

Control" toolbox. Software freely distributed at

http://www2.laas.fr/OLOCEP/romuloc/

Conference activities:

- D. Peaucelle and Y. Ebihara organize an invited session "Robustness

and LMIs" during the IFAC Symposium on Robust Control Design,

Toulouse, July 2006

- V. Sima organizes an invited session "Advances in numerical

algorithms for robust control and its applications" during the

IFAC Symposium on Robust Control Design, Toulouse, July 2006

- G. Calafiore and F. Dabbene organize an invited session

"Probabilistic and Randomized Methods for Control" during the IFAC

Symposium on Robust Control Design, Toulouse, July 2006

- P. Rapisarda organizes three invited sessions "Behavioral system

theory", "Control, estimation, and identification in a behavioral

setting", "Functional and algebraic methods in behavioral systems

and control theory" at the International Symposium on Mathematical T

heory of Networks and Systems, Kyoto, July 2006

- A minicourse "Recent developments in behavioral system theory"

is given by P. Rapisarda and J. C. Willems at the International

Symposium on Mathematical Theory of Networks and Systems, Kyoto,

July 2006, see http://www-ics.acs.i.kyoto-u.ac.jp/mtns2006/abstracts/pr-jcw.pdf

- Yasuaki Oishi and Yasumasa Fujisaki organize a Minisymposium

"Randomized and Probabilistic Techniques for Complex Systems

Design" at the International Symposium on Mathematical Theory of

Networks and Systems, Kyoto, July 2006

- G. Calafiore organizes a session "Probabilistic and Randomized

Methods for Robust Design" at EURO 06, 21st European Conference

on Operational Research, Iceland, July 2006

- The 4th International Workshop on Total Least Squares and

Errors-in-Variables Modeling is organized by S. Van Huffel and

I. Markovsky and will take place in Leuven in Aug. 2006,

see http://homes.esat.kuleuven.be/~imarkovs/workshop.html

- N. Karampetakis and A. Vardulakis are organizing an invited session

"Numerical and Symbolic Methods for CACSD" during the IEEE CACSD conference,

Munich, Oct. 2006

- V. Sima and D. Kressner are organizing an invited session "Robust

numerical methods for control" during the IEEE CACSD conference,

Munich, Oct. 2006

Journals, books:

- preparation by N. Karampetakis and A. Vardulakis of a special issue

of International Journal of Control dedicated to symbolic computations

for CACSD

- preparation by Z. Hurak and M. Hromcik of an invited special issue

of International Journal of Robust and Nonlinear Control dedicated

to polynomial methods

- I. Markovsky is a guest editor, together with S. Van Huffel,

R. J. Vaccaro, and T. Soderstrom, of a special issue of Signal

Processing on "Total Least Squares and Errors-in-Variables Modeling".

This special issue will publish selected papers presented at the

"4th International Workshop on Total Least Squares and Errors-in-Variables

Modeling" but is open to general submissions as well

- the book "Exact and Approximate Modeling of Linear Systems:

A Behavioral Approach" has been published by SIAM, Mar. 2006,

see http://www.ec-securehost.com/SIAM/MM11.html

- Probabilistic and Randomized Methods for Design under Uncertainty.

G. Calafiore, and F. Dabbene, editors. Springer-Verlag, London, 2006,

see http://www.springer.com/sgw/cda/frontpage/0,11855,1-156-22-52501991-0,00.html

News:

- change of the chair of the action group of polynomial methods:

Martin Hromcik takes over Zdenek Hurak

- following an invitation by R. Middelton, the IEEE CSS VP for conference

activities, members of the TC on CACSD have been invited to actively

contribute to the 2008 Multiconference on Systems and Control (MSC)

- a meeting of the TC on CACSD is planned on Friday July 7, 2006 in Toulouse,

France, during the IFAC Symposium on Robust Control Design.

This is a joint meeting with the IFAC TC 2.1 on Control Design

(chaired by Patrizio Colaneri) and the IFAC TC 2.4 on Robust Control

(chaired by Carsten Scherer).