

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 Theory 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. Vardoulakis 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. Markovskiy 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. Middleton, 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).