

More working groups should be formed, for example on suspension systems or, more generally, on lateral dynamics control. However this will be a possible choice and commitment of the future TC chairman. After four years, indeed, I think it is better to inject new energy and enthusiasm in this TC and, with this in mind, I suggested a possible candidate to prof. Yutaka Yamamoto, VP-elect for Technical Activities of our Society, and I believe that candidate will actually be the next chairman.

Here, on ending my chairmanship, I wish to thank the BoG for the confidence given to me, and to Jessie Grizzle, in first approving the idea to form a TC on Automotive Controls, and then choosing me as chairman. As often happens on these occasions, I realize that much more could have been accomplished, and that I'm leaving many tasks to my successor. On the other side I hope to have contributed to the first steps of a durable idea.

Technical Committee on Computer Aided Control System Design

From: Andras Varga Andras.Varga@dlr.de, Chair

Date: November 10, 2004

The TC on CACSD organized his activities around seven so-called Action Groups. Each of these groups has its own chairman/chairmen and maintains its own web site. The main goal of the groups is to serve as interfaces to experts working in the respective fields, by involving them in activities like preparing special issues, organizing invited sessions, etc. The activities in the last 12 months were oriented towards:

1. Editing special issues on CACSD related topics

To increase the interest for numerical issues, a special issue of the CSM on Numerical Awareness in Control has been proposed in 2003. As Guest Editor, Andras Varga invited some of the best experts in the control numerics field to contribute. Four papers have been accepted after thorough reviews and the special issue appeared in February 2004, together with an editorial essay of Andras Varga on "Numerical Awareness in Control".

Pieter Mosterman, the chairman of the Action Group on Hybrid Systems, served jointly with Sebastian Engell, as Guest Editors of a special issue of IEEE Transaction on Control Systems Technology on **Computer Automated Multiparadigm Modeling**.

2. Supporting the organization of CACSD'2004 Symposium

The chairmen of Action Groups within the TC on CACSD have been actively involved in the organization of the joint CCA/CACSD/ISIC'2004 event. Michael Sebek and Didier Henrion served as CACSD'04 General Chair and, respectively, Invited Sessions Chair, while most of chairmen served as members of the IPC and organized invited sessions on specific aspects of CACSD.

3. Supporting the organization of joint CCA/CACSD 2006 conference

The joint CCA/CACSD event in 2006 will take place in Munich, Germany. For the first time, these two conferences are organized with a unique General Chair. Members of TC on CACSD are strongly involved in the organization of this joint event. The chairman of TC, Andras Varga, will serve as 2006 CCA/CACSD General Chair. The 2006 CACSD Program Chair will be Christian Schmid and the Invited Session Chair will be Pieter Mosterman, while Didier Henrion will serve as Publication Chair for both CCA and CACSD. It is proposed that ISIC will also join CCA/CACSD 2006.

4. Reorganizing activities

A new Action Group has been initiated by Micheal Sebek and Didier Henrion to cover research and software development activities in the field of "Polynomial Methods for Control System Design". The goal of this group is to bring together specialists from various fields of science and engineering working with polynomials and polynomial matrices with focus on control system design and signal processing. A very informative home page for this Action Group has been prepared by Zdenek Hurak, with links to active groups, current projects, available software, and people working in this field.

The former chairman of the Action Group on **Evolutionary Computation**, Yun Li, stepped down from his activity at the end of 2003. Finding a successor was until now not successful. Therefore, this activity has been temporarily discontinued.

5. Maintaining and updating the TC web pages

This is a regular maintenance activity and has been done both at the level of the TC homepage as well as at the level of the seven Action Groups.

6. Specific activities within Action Groups

A standard activity for all groups was the updating/maintenance of web pages and networking within each group. Additionally, the following specific activities took place:

6.1 Control Numerics and Software – Chair Andras Varga

- editing a special issue of IEEE Control Systems Magazine on “Numerical Awareness in Control”, appeared in February 2004. The 4 papers are accompanied by an editorial essay by A. Varga.
- member of IPC for CACSD’04

6.2 Interval Methods for Control – Chair Josep Vehi

- member of IPC for CACSD’04
- organizing an invited session on “Interval Tools for Control” at CACSD’04

6.3 Hybrid Systems - Chair Pieter Mosterman

- member of IPC for CACSD’04
- organizing an invited session on “[Computer Automated Multi Paradigm Modeling](#)” at CACSD’04;
- editing a special issue of the IEEE Transaction on Control Systems Technology on “Computer automated multiparadigm modeling”, which appeared March 2004

6.4 Symbolic Methods for Control - Chairs Antonis Vardulakis and Nikos Karampetakis

- preparing a proposal for a special issue of IEEE Control Systems Magazine on “Symbolic methods for CACSD” followed by discussions with the Editor of the International Journal of Applied Mathematics and Computer Science for a special issue in this journal
- organizing two invited sessions at the 12th Mediterranean Conference on Control and Automation, June 6-9, 2004, Kusadasi, Izmir, Turkey on "Computational Methods for CACSD"
- A. Vardulakis was member of IPC for CACSD’04

6.5 Polynomial Methods for Control System Design – Chairs Michael Sebek and Didier Henrion

- The Action Group formally started on October 1st, 2004 with a new home page with links to active groups, current projects, available software, and people working in this field. The web page intends to help collecting, sorting and presenting available and relevant information on polynomials, polynomial matrices and polynomial control design methods with special focus on computational tools.
- Henrion organized an invited session on “Polynomial Design Methods” at CACSD’04

6.6 Teachware for CACSD - Chair: Christian Schmid

- member of IPC for CACSD’04

Technical Committee on Control Education

From: Bozenna Pasik-Duncan, Chair, bozenna@math.ukans.edu

Date: November 12, 2004

One of major goals of the Technical Committee on Control Education is:

To promote an increased awareness among students and teachers of the importance and cross- boundary nature of control and systems technology. The Committee continues organizing the Workshops for the middle and high schools students and teachers at the major IEEE CSS sponsored conferences . The Workshops took place in Chicago, Denver, Las Vegas, Maui, Radom-Poland and will take place in Portland, Limasol-Cyprus, Prague-Czech Republic, Seville-Spain, San Diego, New York and many more...

I. The Technical Committee met at the ACC'04 in Boston where it had a very productive meeting with representation of undergraduate and students. The following issues were discussed in details: