

REPORT TO THE
IEEE CONTROL SYSTEMS SOCIETY BOARD OF GOVERNORS (BoG)
FROM THE VICE PRESIDENT, TECHNICAL ACTIVITIES
MIROSLAV KRSTIC
June 2003

The Technical Activities Board welcomes its new members for 2003: Dr. Stephen Weibel (Chair, TC on Aerospace Controls), Professor Ian Hiskens (Chair, TC on Energy Conversion Systems), Professor Richard Bratz (Chair, TC on Industrial Process Control), Professor Marios Polycarpou (Chair, TC on Intelligent Control), Professor Geir Dullerud (Chair, TC on Robust Control), and Professor Michael Demetriou (Chair, TC on Distributed Parameter Systems).

The TAB currently has 16 Technical Committees. Two of the previous TC's (Power Systems and Control Electronics) have been reconstituted into one new committee (Energy Conversion Systems). One new committee has been introduced (Distributed Parameter Systems). The TC for Real Time Control, Computing & Signal Processing is being discontinued with the retirement of its last chair, E. Arzen. Strong consideration was given to continuing this committee, along with extensive effort to identify an active, visible candidate for a chair of this TC. The result of this exercise was the conclusion that this area currently gravitates towards other societies within IEEE, while those researchers that do gravitate towards CSS (measured by their attendance to our conferences like CDC and ACC) are already adequately represented in our TC's for Hybrid Systems, Networks and Communication Systems, Discrete Event Systems, etc.

A meeting of the TAB was held in December 2002 at the Las Vegas CDC.

The plan of TAB efforts for 2003 includes:

- Re-energize individual Technical Committees, especially the TCs in currently popular areas of research like Biosystems and Networks/Communications.
- Work with Automotive and Energy Systems TCs to ensure the fuel cell activity is covered by either or both committees.
- Consider establishing a TC on Finance Systems and related stochastic control/estimation subjects.
- Work with the Aerospace Control TC to ensure the new activities on control and coordination of UAVs are properly covered.
- Strengthen the (informal) interaction of TCs with CSS journals and conferences.
- The development of regional and (graduate) student-oriented symposia.

Technical Committee on Computer Aided Control System Design
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From: Andras Varga, TC Chair, andras.varga@dlr.de

Date: 28 April 2003

The activities in the last 6 months were oriented towards:

Editing a CSM Special Issue on "Numerical Awareness in Control"

To increase numerical awareness in control, one of my suggestions was (see Minutes of BoG meeting of May 7, 2002) to prepare a special issue of the CSM on numerical methods for control. As Guest Editor for this issue of the CSM (tentatively scheduled for Feb. 2004), I invited some of the best experts in the control numerics field to contribute. Four papers have been submitted and reviewed. The final submissions are expected towards end of June.

Preparation of CACSD'2004 Symposium

The preparations are quite advanced. On behalf of the TC on CACSD I am involved in supervising the organization of the joint CCA/CACSD/ISIC'2004 event. I am in close contact with the CACSD'04 General Chair Michael Sebek and Program Chair Sebastian Engel. Current issues are preparing the proposal of budget for final approval, nominating the CACSD PC for Invited Sessions (Didier Henrion), nominating the CACSD International Program Committee, preparation of the conference web-site, preparation of a Call for Papers, advertising the conferences in various ways.

Preparing a proposal for a joint CCA/CACSD 2006 Symposium

Incipient preparations started to organize a joint CCA/CACSD event in 2006 in Germany. For the first time, it was proposed to organize these two conferences with a single General Chair and two Program Chairs, one for CCA and one for CACSD. A proposal was worked out jointly with Roberto Tempo, VC Conferences, by proposing names for General Chair and Program Chairs and will be submitted to be approved.

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 five Action Groups.

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:

1. Control Numerics and Software – Chair Andras Varga
 - editing a CSM Special Issue on Numerical Methods for Control: the 4 submitted papers have been sent out for reviews, the reviews have been collected, and presently the decisions of acceptance/revision are in preparation based on these reviews. The final submissions are expected towards end of June.
2. Interval Method for Control – Chair Josep Vehi
 - preparing an intensive (30 hours) international course on Interval Methods for Control (addressed mainly to PhD students in control, to be held in spring 2004)
3. Hybrid Systems - Chair Peter Mosterman
 - starting the preparations for a special session for the CACSD'04 in Taiwan on computer automated multi-paradigm modeling;
 - editing a special issue of the IEEE Transaction on Control Systems Technology on “Computer automated multiparadigm modeling” (in final publication phase)

Technical Committee on Control Education

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

Date: 15 May 2003

The committee met at the 2002 CDC in Las Vegas. The minutes from the meeting are posted on the committee's web page. The Committee's focus since the last meeting of the BOG in December, 2002 has been on the following activities:

1. Control Engineers and Control Engineering Students Team Up to Show High School Students that Control is Everywhere.

Over 130 High School Students and 10 Teachers from Las Vegas Magnet High Schools attended the Workshop at 2002 CDC. The mini preparation course offered at the school, before the workshop was recognized and very highly appreciated by students. The Workshop was very successful and has built an important network between students/teachers and control researchers. The professionally prepared workshop evaluation was given to participants at the end of the Workshop and the results have been very important for improvements of future workshops. The committee received many thank you messages from students and teachers, here is a small sample:

... Dr. Pasik-Duncan,

What a wonderful day, my students and I all agreed that listening and thinking so hard truly wore us out. I have had my ears open for the candid comments among the students, because I was listening so intently I had not closely followed my student's responses. They were all were greatly impressed with the level of knowledge presented, the achievements of the young students, and the many ways that math could be applied. Of course, the soccer team was the favorite, but among my students it seems that most of the presentations were a favorite with a smaller group of students. Also you were high on the