

## Technical Committee on Computer Aided Control System Design

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October 29, 2001

The activities in the last 12 months were oriented towards:

1. Improving the quality of information provided to the CACSD community
2. Organizing the CACSD'2002 Symposium
3. Making efforts to avoid parallel IEEE and IFAC CACSD Symposiums
4. Having preliminary discussions to join the 2004 CCA and CACSD in Taiwan
5. Specific activities within Action Groups

Activities in detail:

1. A thorough updating of the CACSD TC homepage has been done. This consisted of checking the whole lists of links, adding new information, deleting obsolete links. Complete information (i.e., conference program, plenary speakers, program at a glance etc.) is available on the CACSD TC homepage for the last 7 CACSD Symposiums. The information from the existing working groups have been also updated. CACSD related information is also distributed via the E-Letter.
2. The efforts to join the IEEE International Symposium on Computer-Aided Control System Design (CACSD'2002) and the IEEE International Conference on Control Applications (CCA'2002) were successful. The joint event will take place in Glasgow, Scotland, between September 18-20, 2002. The CACSD'2002 General Chair is Prof. John Gray (Univ. Salford), the Program Chair is Prof. Neil Munro (UMIST) and the Invited Session Chair is Dr. Dawei Gu (Univ. Leicester).
3. The IEEE Symposium on CACSD is organized by the IEEE CSS every two years, while the IFAC Symposium on CACSD is organized by IFAC every three years. Thus, every six years an overlap of these two events occurs which splits the CACSD community, many experts being able to attend only one of the two events. In order to allow a broader attendance of specialists, theoreticians and practitioners, my main goal is to produce an agreement between IEEE and the IFAC to organize a joint meeting every 6 years, when an overlapping occurs. I had serious discussions with the IFAC president Prof. Pedro Albertos and agreed upon to avoid future overlappings. An alternative to be also discussed is to increase the period of the IEEE event to three years and avoid overlapping in this way. I prepared a document for a decision of the Executive Committee of the CSS on this issue (Appendix 1) and a proposal agreement between IEEE and IFAC to be signed by both parts (Appendix 2).
4. Since the preparation for the CCA'2004 are quite advanced, I started discussing to join CCA, CACSD and ISIC once again in Taipei, having in mind the very successful event in Dearborn (1998). The CCA General Chair, Shinji Hara, supports the single venue, so the next task for me will be to find an appropriate CACSD General Chair and program Chair. The only aspect to be clarified is the possibility to change the periodicity of the IEEE CACSD Symposium from two years to three years. In that case, the future CACSD will be in 2005 (instead 2004).
5. Activities within the Action Groups
  - 5.1. **Control Numerics and Software – Chair Andras Varga**
    - major updating the web pages, especially the sections “News”, “Projects” and “Software”
  - 5.2. **Teachware for CACSD – Chair Christian Schmid**
    - maintained the web pages;
  - 5.3. **Hybrid Systems - Chair Peter Mosterman**
    - maintained the web pages;

- organized a special session on computer automated multi-paradigm modeling at the IEEE Conference on Control Applications 2001;
- organized a special issue of ACM Transactions on Modeling and Computer Simulation and IEEE Transactions on Control System Technology on the topic of computer automated multi-paradigm modeling.

#### 5.4. *Multidisciplinary System Simulation – Chair Herman Mann*

- Maintained and updated the web pages; note the impressive access statistics
- providing free web-based modelling/simulation services using the Matlab compliant DYNAST engine (accessible via the “Online tools” page);
- using the website for distance-education seminars (e.g. University UNAM Mexico City), in the Socrates project "RichODL - Enriching ODL by knowledge sharing for collaborative computer-based modelling and simulation"
- preparing posters to promote the website in engineering schools

#### 5.5. *Evolutionary Computation– Chair Yun Li*

- maintained the web pages;

### Appendix 1

#### Organizing future CACSD Symposia

**Facts:** The **IEEE Symposium on Computer Aided Control System Design** is organized by the IEEE CSS every two years, while the **IFAC Symposium on Computer Aided Control System Design** is organized by the IFAC every three years. Thus, every six years an overlap of these two events occurs which splits the CACSD community. As consequence, many experts are able to attend only one of the two events. This was experienced during the last IEEE and IFAC CACSD Symposia, held almost simultaneously in September 2000 in Anchorage, Alaska and Salford, UK, respectively.

**Goal:** To allow a broader attendance of IEEE CACSD Symposia, such an overlapping must be avoided in the future.

**Possibilities:** After having informal discussions at the ECC'2002 with Pedro Albertos (IFAC President), Tamer Basar (Past president IEEE CSS), and other officials, I would like to summarize my own position as CACSD TC chairman. In my opinion, there are only three possibilities to avoid such an overlapping:

- To organize only joint IFAC/IEEE conferences every 3 years (proposal of Pedro Albertos)

**Advantage:** no parallel conferences

**Possible disadvantages:** 2 conferences in 6 years (instead 5 now) seems to be a dramatic change which is not justified by the present level of the CACSD related research; need an IEEE/IFAC agreement

- To organize a joint IEEE/IFAC conferences every 6 years when an overlap occurs

**Advantage:** no parallel conferences; only 4 conferences in 6 years

**Possible disadvantages:** in the middle period, there are three conferences in three consecutive years (e.g., 2002 - IEEE, 2003 - IFAC, 2004 - IEEE); need an IEEE/IFAC agreement (an agreement proposal prepared)

- To keep IEEE and IFAC CACSD Symposia as separate events, but reduce the number of IEEE Symposia to 2 in six years. The IEEE Conference will be organized in the years of the IFAC congresses or one year before.

**Advantage:** no overlapping anymore; only 4 conferences in 6 years; no formal agreement between IEEE and IFAC is necessary; CACSD and CCA can be jointly organized

**Possible disadvantages:** Apparently none.

**Other aspects to be considered:** It is almost a tradition now that CCA, CACSD, and occasionally ISIC, are jointly organized. This has many advantages, not only technical but also financial. For example, the next CACSD Symposium (CACSD'2002) will be jointly organized with CCA'2002 in a same venue at Glasgow. Further, discussions are on the way with Shinji Hara (CCA'2004 General Chair) to organize the CACSD 2004 Symposium jointly with CCA and ISIC in Taipei.

**My proposal:** Taking into account the tradition and the advantages to join CCA and CACSD in a single venue, and the real possibility to have an agreement with IFAC, the second choice is probably the one to consider first. The first IEEE/IFAC joint event will be organized in 2006 by IEEE. If the IEEE/IFAC agreement is not acceptable to IEEE, then the third choice is the only way to avoid overlapping.

## Appendix 2

### IFAC/IEEE agreement to organize joint CACSD Symposia

**Facts:** The **IEEE Symposium on Computer Aided Control System Design** is organized by the IEEE CSS every two years, while the **IFAC Symposium on Computer Aided Control System Design** is organized by the IFAC every three years. Thus, every six years an overlap of these two events occurs which splits the CACSD community. As consequence, many experts are able to attend only one of the two events.

**Goal:** In order to allow a broader attendance of CACSD Symposia, the **IEEE CSS** and the **IFAC** agree to organize a joint meeting every six years, when an overlap occurs.

**Name of the joint conference:** The conference will be alternatively called the

**IFAC/IEEE Symposium on Computer Aided Control System Design**  
or the **IEEE/IFAC Symposium on Computer Aided Control System Design**.

A subtitle will clarify that it is jointly sponsored by IFAC and the IEEE CSS.

**Organization of the joint conference:** The joint **IFAC/IEEE Symposium** will be organized every six years, under the alternative guidelines and responsibility of IFAC or IEEE.

- The IEEE/IFAC Symposium will be run according to the IEEE financing and publishing policies.
- The IFAC/IEEE Symposium will be run according to the IFAC financing and publishing policies, and will take place under the patronage of an IFAC NMO.

An International Program Committee, as well as an *ad hoc* Steering Committee, will be formed, both being evenly composed by members of both societies.

**Conference publications:** At each event, the first partner will hold the Copyright for the conference publications and the second partner will have privileged access to the conference materials.

- In the case of an IEEE/IFAC Symposium, the IFAC Publications may purchase copies of the IEEE Proceedings for resale. The purchase price will be at the average publication cost and the order will be placed prior to the initial printing arrangements for the conference. The list price used by IFAC will be not less than that established by IEEE for non-members.
- In the case of an IFAC/IEEE Symposium, the IEEE may purchase copies of the IFAC Preprints for resale at the average publication cost and the order will be placed prior to the initial printing arrangements for the conference. IEEE can follow its own policy to sell Proceedings to its members.
- The IFAC journals, as well as the IEEE CSS journals, will have priority to publish the conference papers, with the order of priority indicated by the conference name. It is understood that the customary credit line will be used with these papers.

**Further agreements:** It is also agreed that in the years of joint IFAC/IEEE events, the Technical Committees on CADCS from both organizations will not organize separate events, although they can contribute with special sessions in related meetings.

This agreement will apply from 2006 and following years, if there is nothing against from any partner, notified at least 2 years in advance. In 2006 the first joint event will run under the IEEE responsibility.

President of IFAC  
Pedro Albertos

President of IEEE Control Systems Society  
Wilson J. Rugh