Report MEETING Technical Committee on CAS Education and Outreach CASEO

Monday 31 May 2010 at ISCAS in Paris 12:50-14:00

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Attendance list CAS Education and Outreach TC

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Agenda
0. Introduction of the participants of the meeting
1. Status of the CASEO TC
2. Report on the past activities in the period May 2009-May 2010
3. Webpage http://homes.esat.kuleuven.be/~caseo/index.php
4. Status and plans for further action points: short term/long term/adapt/responsible
5. Any other business

Report
1. Status of the CASEO TC
CASEO TC has at this moment 18 registered members and many more have expressed interest in the activities. The TC is up and running and is developing activities. Joos Vandewalle (JV) is acting as Founding Chair for a two year term from May 2009-May 2011, and Tokunbo Ogunfunmi as secretary. Next year at ISCAS elections for chair will be held.

Joos Vandewalle and Tokunbo Ogunfunmi will be track chairs for CASEO at ISCAS 2011. The VP-Technical Activities requests all TCs to have a vision for their activities. Our purpose is described in the charter as: The Circuits and Systems Education and Outreach Technical Committee (CASEO TC) focuses on the education and outreach of circuits and systems. The TC shall address the role, the process and the promotion of the education of CAS subjects in electrical engineering education and make initiatives to enhance its quality and attraction worldwide. Special attention is devoted to outreach initiatives that stimulate youngsters to CAS items worldwide, and to the social and ethical role of CAS related topics. So our vision is that the promotion, innovation and stimulation of CAS education is of crucial importance for the professional development of EE in a global society.

2. Report on the past activities in the period May 2009-May 2010
a preliminary report of the past year's activities is presented and additional remarks are made
Special Session and a Track on CAS Education at ISCAS 2010 is organized
further details in annual report.

3. Webpage
A webpage for the TC is set up. It can be reached from the CAS Webpage. It is maintained at the location of JV. The full address is http://homes.esat.kuleuven.be/~caseo/index.php
It is the ambition to bring value to it by collecting material related to the education issues.
Also new members can sign up at the webpage. At present there are 18 registerded members.
Action: Everybody is invited to contribute useful material by emails to JV. Non members are invited to sign up.

4. Status and plans for further action points:
4.1 ISCAS 2011
The General Chair and Program Chair of ISCAS 2011 have in interaction with JV decided to have a seperate Track for CASEO TC at ISCAS 2011. Care should be taken to have good quality papers in the Track and not second class papers. The parameters to evaluate papers are discussed. Certainly

the creativity and the innovation in the contribution should be considered, and the papers should satisfy minimal conditions of language, relevance, structure, attractivity.

We can set up special sessions at ISCAS. These sessions should stress items like challenges, industry and training issues for professional engineers, curriculum structure, tools to train,

Special sessions should be submitted to ISCAS special session chair by September 10, 2010 with an endorsement by the TC chair. It is important to mention that the special sessions should deal with emerging topics that are typically not appearing at ISCAS and will be selected on the basis of quality and on emerging capacity. It is recommended to have the special sessions endorsed by the TC Chairs. The papers (including the special session papers) will all be reviewed, and similar acceptance rates as this year are envisaged. Some TCs will be combined in one track. The Track structure is as follows

15.0 Education in Circuits and Systems
15.1 CAS Educational Methods and Instruction
15.2 CAS Educational Technology
15.3 CAS Educational and Professional Development Programs
15.4 CAS Ethics and Professional Conduct
15.5 Other Areas in CAS Education

ISCAS 2011 Deadlines
Deadline for submission of Tutorial Proposals: 10 September 2010
Deadline for submission of Special Session Proposals: 10 September 2010
Deadline for submission of Full 4-page Papers in Regular Sessions: 29 September 2010
Deadline for submission of Full 4-page Papers in Special Sessions: 29 October 2010
Action: Everybody is welcome to make initiatives for ISCAS2011 and contribute to it. Please send it to all those in the mailing list. Once the proposals have converged, the CASEO can endorse it and submit it to ISCAS2011.

4.2 CAS Concepts inventory Develop concepts inventory in CAS. Such an inventory has already been set up in the Signal Processing Society, and Tokunbo Ogunfunmi has experience with it and will coach this activity. Typically such an inventory describes the input and output and 6 months retention of the items in a course. A webpage collection of concepts inventories is maintained at Purdue https://engineering.purdue.edu/SCI/workshop/tools.html

ACTION- All those who want to contribute to the concepts inventory can reply to Tokunbo Ogunfunmi.

4.3 Contact with the IEEE Education society is made by Martin Di Frederico (see also annual report)

4.4 Among the participants of the meeting an interesting tour of ideas, experiences and actions is made.
-Eduardo Alarcon described his experience with CDIO Conceive Design Implement and Operate. It is a didactical framework http://web.mit.edu/edtech/casestudies/cdio.html that is developed at MIT and Chalmers in view of accomodating and motivating more diverse populations of students. This is now also being implemented at various universitiesand also in Barcelona. It fits also in Problem Based Learning PBL. Complex ICT systems like cochlear implants, internet, interplanetary communication are analyzed and studied. Also the marketing of the new products is considered. It has led to a substantial increase in motivation among the students.
-Yannis Tsividis mentions that changes in the attitudes and interests of students has forced at many places to use no longer the book of Desoer and Kuh or alike in introductory CAS courses. He has experimented successfully with a motivating hands on course with electronic hardware (see also special issue of CAS Magazine Spring 2009).
-Sergio Callegari has experimented with EE courses in Computer Science and in Mechanical Engineering.
-Josef Nossek is still positive about a CAS approach like Desoer and Kuh at TUMunich.
-Babak Ayazifar described his teaching experience at UCBerkeley with an introductory course on signals and systems, that is well received by the EECS students. The common engineering course was too watered down.
-Orla Feely feels that books like Desoer and Kuh have a lasting value and raises the question what our

society can do when these books fall out. Some initiatives with the web archives, or out of print. There are already initiatives to post older books electronically on line.
- Malgorzata Chrzanowska-Jeske has mentioned that the TC can propose also two candidates for the Distinguished Lecturer Program. The procedure for on line submission of nominations is now open until September 30,2011 webpage http://www.ieee-cas.org/ click on the Online DLP nomination process. An endorsement by the TC is needed.
-Babak Ayazifar mentions that MIT has revamped its basic EE curriculum with among other a practical course that is not centered around devices but on analog/digital/communication called volt-by-volt, bit-by-bit, packet-by-packet

5. Any other business
No other items were addressed.