

Minutes of the Nonlinear Circuits and Systems Technical Committee meeting 2016

Location: Le Centre Sheraton Montréal - Salon 2, Montreal, Canada (in the framework of ISCAS 2016)
Date: 23rd May 2016
Time: 12.00-13.00 UTC-05:00

Members present at the meeting (24)

- Elena Blokhina
- Sergio Callegari
- Chi Tsun (Ben) Cheng
- Abdelali El Aroudi
- Dimitri Galayko
- Zbigniew Galias
- Herbert Ho-Ching Iu
- Michael Peter Kennedy
- Francis Lau
- Adrian Leuciuc (also as ISCAS 2017 organising committee representative)
- Xiang Li
- Wolfgang Mathis
- Yoshifumi Nishio
- Maciej Ogorzalek
- Hiroo Sekiya
- Gianluca Setti
- Marco Storace
- Ljiljana Trajkovic
- Michael Tse
- Yoko Uwate
- Yongxiang Xia
- Wei Xing Zheng
- Tyrone Fernano (newly approved member)
- Todd Freedorn (newly approved member)
- Zhihai Rong (newly approved member)

Guests

- Franco Maloberti (CASS president)
- Eduard Alarcon (CASS VP for Technical Activities)
- Ralph Etienne-Cummings (ISCAS 2017 organising committee representative)
- Marcus Prochaska

This documents makes use of the following acronyms

CASS Circuits and Systems Society

ISCAS International Symposium on Circuits and Systems

NCAS Nonlinear Circuits and Systems

TC Technical Committee

VP Vice President

1. Call of order, welcome

At 12:00, the Chair of the Committee, Sergio Callegari, opened the annual meeting of the NCAS TC and welcomed all the participants. The participants introduced themselves. In particular, Sergio Callegari underlined the presence of guests at the meeting including representatives of the ISCAS 2017 organising committee and CASS Executive Officers. Then he presented the meeting agenda.

2. Confirmation of previous minutes

Sergio Callegari reported that two sets of minutes were pending approval, one from the ISCAS 2015 meeting and one from an online meeting held on an internet platform in Oct 2015. Copies of the minutes were circulated among the TC members, seeking comments or request for fixes.

Vote on the minutes approval was then postponed after the next point on the agenda, to give time to the participants to check the minutes.

3. Communications

Novelties in the ISCAS 2016 review process

Sergio Callegari anticipated that some novelties were being introduced in the submission review process for ISCAS 2017 and left the floor to the representatives of the conference organizing committee to quickly illustrate them.

Adrian Leuciuc, a representative of the ISCAS 2017 organising committee, mentioned that the structure of the ISCAS sub-tracks and topics will be different compared to ISCAS 2016. He also mentioned the opportunity to assign the primary and secondary tracks for multi-disciplinary papers in order to facilitate the review process by two technical committees.

Ljiljana Trajkovic asked why the sub-tracks had been changed.

Adrian Leuciuc reported that these changes were agreed upon at the CASS level. He also offered himself to bring any relevant feedback to the ISCAS 2017 organizers.

CASS VP for Technical Activities, Eduard Alarcon, provided a more detailed answer to the question, indicating that that the new sub-track structure aims at a better and clearer organization with less overlap in the sub-tracks under the management of the different Technical Committees. Furthermore, it aims at facilitating the review of interdisciplinary papers and at being better aligned with technical activities at the CASS level.

Sergio Callegari invited members to the Wednesday's meeting (25th May 2016) on the ISCAS 2017 review process and urged them to ask questions.

The agenda point on communication was then briefly interrupted to complete the vote on the past minutes.

Resume of point 2 (Confirmation of the previous minutes)

Sergio Callegari called to approved the minutes of the May 2015 (ISCAS 2015) and October 2015 (online) meetings. Minutes were approved by rise of hands by all members with the exception of Ljiljana Trajkovic who abstained since she did not attend the meetings.

Resume of point 3 (Communications)

Novelties with the TC mailing list

Sergio Callegari informed all members that a new mailing list was being set up for the TC by the CASS Office. He also asked all members to keep using the legacy list until the new list was fully tested. Sergio Callegari took the occasion to thank Ljiljana Trajkovic for having maintained the legacy committee member mailing list and for continuing the effort for some more time.

IEEE Collaboration tools

Sergio Callegari reminded all members about the new communication tools being set up by IEEE, including Collabratec and GoogleApps@IEEE. He invited all the TC members to look into these tools and to register for them since collaboration tools become more useful when a critical mass of users is reached.

4. Reports

TC Activities from ISCAS 2015 to ISCAS 2016

Sergio Callegari reported on the TC activities over the period from May 2015 to May 2016. He mentioned that a detailed report was available in electronic form, and that it was circulated before the meeting and that the report has a slightly different format from the previous one. The current format is a work in progress towards a new and more uniform reporting standard to be adopted by all the CASS TCs. He then proceeded to offering some highlights from the report.

In illustrating the activities, the Chair observed that the number of members who provided their input to draw the report is appreciable but can be improved. He then moved to mention the many recognitions received by TC members through the year and the large number of activities they were involved in, including tutorials, lectures and special sessions organised by committee members as well as their service in CASS, IEEE and beyond IEEE.

Sergio Callegari reported on the appointment of all committee officers. The Chair, Chair Elect and Secretary would serve a 2-year term and there would be no need to appoint new officers this year.

The Chair also reported on some membership changes occurred through the year, including some resignations (Bharathwaj Muthuswamy, Gabriele Manganaro, Guoliang (Larry) Xue, Shujun Li) due to a shift in the research interests of some participants. He also mentioned that there were new memberships (Federico Bizzarri) and that many new membership applications were received.

The Chair mentioned some endorsements made by the TC over the year, including one that eventually lead to the appointment of the TC member Mario di Bernardo as a CASS Distinguished Lecturer. The TC also supported two candidates to the Senior Editorial Board of the *Journal on Emerging and Selected Topics in Circuits and Systems*, with the TC member Herbert Iu eventually entering the board. Finally the TC supported the application of the ICNC-FSKD 2016 Conference for the IEEE CASS Technical Co-Sponsorship.

The TC also contributed to the writing of some documents including a section of the book *A Short History of Circuits and Systems* and some reports aimed at collecting data on TCs to help the management of CASS by its executive committee.

Franco Maloberti, CASS President, concluded the discussion of this point by offering some remarks. He underlined the importance of making all CASS members aware of the activities that are going on in the TCs and of the accomplishments. He mentioned that CASS is in the process of renewing its website which can be a place to organize all the material (including educational items, videos, documents) considered relevant and useful to the community. He also invited the NCAS TC and all CASS members to propose new activities, ideas and initiatives and he reminded that economical support and or material support (tools, web presence) can be available for good proposals. As examples, he suggested the organization of side events at conferences or local events. He stressed that making activities visible from outside the TCs that organize them is essential for CASS and to foster cooperation between the TCs

ISCAS 2016 Track Organization (by Xiang Li and Fernando Corinto)

Sergio Callegari gave the floor to one of the Track Co-chairs, Xiang Li, to report on the Nonlinear Track at ISCAS 2016. Xiang Li illustrated the organisation of the ISCAS 2017 Track on Nonlinear Circuits and Systems. In particular, he mentioned that despite the attempts to improve the track structure that were suggested at ISCAS 2015 and discussed during the year, the *E-Papers* systems used to manage the submissions could not be updated to reflect it and system displayed the same list of sub-tracks as in 2015.

He mentioned that the acceptance rate was 44% with 84 papers submitted and 37 papers accepted.

Sergio Callegari noticed a small decrease in the number of submissions to the track, but at the same time considered that it is not possible to extrapolate a trend from this change, because fluctuations are normal from year to year, also due to

the fact that the number of submitted papers depends on the geographical location of ISCAS, since the distribution of NCAS experts is uneven in the world and travel costs are significant. Nonetheless, he remarked the need to provide a good advertising of the track and he encouraged all the TC members to promote it. He also underlined, that the different TCs should not compete on the number of submissions, rather cooperate for the success of IEEE conferences as a whole.

Franco Maloberti commented that it is also important for all the TCs to organize and advertise tracks so that they can encourage participation from the industry. Special sessions and roundtables showing the potential impact that research results in the Circuits and Systems area can have on industrial applications can also be a means to open ISCAS and CASS to a stronger industrial involvement.

Adrian Leuciuc remarked that he works for Cadence and there are a number of problems related to intellectual property that makes difficult to publish research from industry. Franco Maloberti acknowledged them and recognized that improving industrial participation will be a long time effort, but underlined the importance of it.

TAD meeting

Sergio Callegari returned on the reporting part of the meeting giving a short summary of the TC Chairs meeting with the CASS Technical Activities VP, Eduard Alarcon.

Progress with the new TC Charter

Sergio Callegari recalled that the NCAS TC is in a transition phase, where it needs completing the renovation of its Bylaws with the approval of a new Charter, conforming to the template provided by CASS. He informed all the participants that a dedicated team has been set up inside the TC to ease the drafting of the new Charter, by putting together all the initial information and assisting the members who would like to make proposals on the topic. The team is composed by Herbert Iu, Elena Blokhina, Jinhua Lu and Sergio Callegari (as current and recent past Officers of the TC) and by Ljiljana Trajkovic and Francis Lau (as past TC Chairs with experience in drafting of TC Bylaws). The team is reachable at the dedicated email address NCAS-TC-CHARTERTEAM@LISTSERV.IEEE.ORG.

5. General orders

Evaluation of new membership applications

Sergio Callegari invited all members to evaluate the new membership applications. These include an application by Chi Tsun (Ben) Cheng that had already been considered positively by the officers and through discussion on the mailing list, pending ratification. Furthermore, there were new applications from Zhihai Rong, Tyrone Fernando, Todd Freeborn, Manuel Dominguez-Pumar and Alberto Oliveri.

Zhihai Rong, Tyrone Fernando and Todd Freeborn, who were present at the meeting, introduced themselves.

All applications were unanimously approved by rise of hands and the new members were congratulated.

Approval of the new ISCAS NCAS Subtrack Structure

Sergio Callegari recalled that a discussion was started on the mailing list about the new subtrack structure to be implemented at ISCAS 2017 and that a final decision needed to be taken at the meeting.

He remarked that the aim of the change is to make all ISCAS tracks consistent and to emphasize some topics that are of particular interest for industry.

Ralph Etienne-Cummings, a representative of the ISCAS 2017 Organising Committee, commented how the new track structure would be implemented at ISCAS 2017. He mentioned that a list of themes (the Internet of Things, Cognitive Computing and etc) will be available in addition to the conventional track structure. With this, submitters would be able to choose the primary track together with an optional secondary track and an optional theme.

The new proposed sub-track structure, previously determined through an online discussion was presented to include the following items

- Circuit Theory
- Complex Networks Analysis, Graph Theory & Applications
- Chaos, Bifurcation & Applications
- Theory and Modeling of Oscillators and PLLs
- Nonlinear Theory & Analysis in Circuits & Dynamical Systems Design

- Modeling and Simulation Methods for Nonlinear Circuits and Systems
- Nonlinear and Networked Control
- Other Areas in Nonlinear Systems and Circuit Theory

Eventually, the structure was voted by rise of hands and approved.

Election of the ISCAS 2017 Track Chairs

Sergio Callegari and Elena Blokhina proceeded to the election of the new Track Co-chairs for ISCAS 2017. Sergio Callegari reminded that according to a recent decision, the new Track Chairs will not be considered TC Officers. He also reminded that, according to the request from the ISCAS 2017 Organizers, the TC needed to select two Track Co-Chairs.

Four TC members declared their availability for the role, namely Marco Storace, Dimitri Galayko, Wei Xing Zheng and Tyrone Fernando.

Elena Blokhina distributed ballots and counted votes upon collection.

Mario Storace and Dimitri Galayko were elected as Track Co-Chairs.

Sergio Callegari congratulated Marco and Dimitri.

6. New business

Sergio Callegari postponed all the new business to online discussion due to a lack of time. This included a request to discuss conference costs, motioned by Surmitro Banerjee and a collection of ideas and request to propose to CASS.

7. Communications from members and any other business

There were no communications from the TC members, nor other business to be discussed.

8. Adjournment

Sergio Callegari thanked everyone who attended the meeting. The meeting was concluded at 13.00.

Prepared by Elena Blokhina and Sergio Callegari in June 2016