

Sensory Systems Technical Committee of the IEEE Circuits and Systems Society

Minutes of the Annual Meeting

ISCAS 2015

Date: Monday 25th May 2015

Time: 12:50 – 14:10

Room 6 A. Negreiros, Cultural Centre Belem (CCB), Lisbon, Portugal

1. Approval of Agenda

The chair, Teresa Serrano-Gotarredona welcomed the participants. The agenda was approved unanimously.

2. Introduction of Members

The meeting participants briefly introduced themselves. 38 people were present at the meeting including 33 TC current members and 5 prospective members. Members attending the meeting are listed in Appendix A.

3. New members

The committee proposed 5 new potential members. These are: Arindam, Basu from Nanyang Technological University, Singapore (arindam.basu@ntu.edu.sg), Viktor Brea University of Santiago de Compostela (victor.brea@usc.es); Ibrahim (Abe) Elfadel from Masdar Institute of Science and Technology (ielfadel@masdar.ac.ae); Nikola Massari from FBK (massari@fbk.eu) and Christos Papavassiliou from Imperial College (c.papavas@gmail.com)

New members are approved unanimously.

4. SSTC new officers' nomination and vote

Teresa reminded the committee of the need to elect the new secretary elect for SSTC. Teresa nominated Shoushun Chen from NTU and Ralph nominated Jennifer Blain Christen from ASU.

Members discussed the criteria for nominating and selecting secretary Elect for the TC. Some members mentioned geographical consideration with officers spanning different geographical locations. Tobi mentioned that we should nominate officers based on their ability to come-up with new initiatives and this should be a criteria. Shih-Chii added that nomination for new TC officers should take into consideration the criteria of being

motivated to introduce new initiatives and to also contribute pro-actively to the TC. After this discussion about the criteria for new officers, the vote was casted and the outcome of the vote results was: 16 voices for Shoushun Chen and 15 voices for Jennifer Blain Christen. Dr. Shoushun Chen was congratulated as the new Secretary Elect for SSTC.

Given the outcome of this vote, the SSTC officers composition will be:

- Past Chair- **Teresa Serrano-Gotarredona**
- Chair - **Piotr Dudek**
- Chair Elect - **Tim Constandinou**
- Secretary - **Amine Bermak**
- Secretary Elect - **Chen Shoushun**

5. Approval of 2014 Minutes

Minutes of 2014 minutes approved unanimously.

6. Annual report of 2014-2015

Annual report for 2014-15 approved unanimously. Teresa reported that 27 members have contributed to the annual report. She mentioned that TCs were asked to analyse the value of the publication list. She reported that TC chairs are asked to provide a curated publication list and a discussion about how best this can be achieved was initiated by the chair. It was suggested that we probably need to report the top 3 representative publication in our future report. She added that TC chairs were asked to provide a curated publication list and there is a need to discuss a method to elaborate the curated list. She also added that there are 3 possible ways of doing that:

1. TC Members are asked to submit all their papers; these are consolidated into a single list; a voting mechanism is used to select the top papers *eg* each member gets, say 7 votes, and the top 10 papers by vote count are listed.
2. TC Members are asked to submit their most important, say 3 top papers each with the 25 word summary describing their importance. The voting process in option 1 could then be applied.
3. TC Members are asked to nominate what they consider to be the, say 3, most important papers in the field published by others. The top, say 10, most nominated papers could then comprise the list

7. SSTC activities.

Demonstration track is now continuing to run for the 7th year as an independent track and is well established. This track has been a success from our TC and also current demos chair (ISCAS 2015) are from our TC.

Distinguished Lecturer Programme (DLP) – New call is due soon and members should consider relevant (and strong) nominations in SSTC remit.

ISCAS 2015 featured a tutorial from our TC, namely: “Event-based frame-free sensors and processing: sensors, simulators and hardware processors” delivered by: T. Delbruck, S. Liu, A. Linares, B. Linares-Barranco, S.Furber, J. Conradt

ISCAS 2015 also featured a special session from our TC, namely: “Real-Time Event-based sensor processing” organized by Jörg Conradt, Shih-Chii Liu.

1. “ConvNets Experiments on SpiNNaker” Teresa Serrano-Gotarredona, Bernabé Linares-Barranco, Francesco Gal.
2. “Human Vs. Computer Slot Car Racing Using an Event and Frame-Based DAVIS Vision Sensor” Tobi Delbruck, Michael Pfeiffer, Raphael Juston, Garrick Orchard.
3. “Real-Time Event-Driven Spiking Neural Network Object Recognition on the SpiNNaker Platform” Garrick Orchard, Xavier Lagorce, Christoph Posch, Steve Furber.
4. “A USB3.0 FPGA Event-Based Filtering and Tracking Framework for Dynamic Vision Sensors” Alejandro Linares-Barranco, Francisco Gómez- Rodríguez, Vicente Vil.
5. “Scene Stitching with Event-Driven Sensors on a Robot Head Platform” Philipp Klein, Joerg Conradt, Shih-Chii Liu

The session was a great success and was very well attended.

The chair added that SSTC should be more pro-active in suggesting future new activities. This should include:

- Promoting the relations of the committee with industry by inviting members from the industry to join the committee, organizing workshop contributions without papers They advice us to create a subcommittee for industrial relations.
- Increasing the visibility of the committee in the social media.
- Applying for “IEEE outreach funds” to organize the suggested events.

Franco Maloberti (CASS president-elect) attended the meeting and addressed the TC. He thanked the TC committee members and mentioned that the Sensory Systems TC is at the heart of CAS and its activities are very relevant and important to CAS. He emphasized on the fact that visibility of the TC needs to be improved by publicizing better the TC activities. He also mentioned that CAS will shortly have a new website with special links to the TCs. Franco added that he is personally happy with the sensory systems as many initiatives took place in the TC. He would however like to see closer integration with other TCs. Also, suggested if anyone has ideas for special activities should engage with CASS – funding is available.

Sandro asked whether request for funding for the “IEEE Outreach funds” should be submitted as individual effort or within the TC. The chair mentioned that it will be better

if activities are proposed with the endorsement of the TC and by inviting TC members to join these activities. Sandro added that the selection of the right topic for such activities is very important and should be in line with CAS activities. For example supporting students participation in BioCAS can be supported. Pamela mentioned funding for special workshops can be sought. Inviting speakers is more in line with DLP and should not be part of “IEEE outreach activities”. Topics related to special projects involving high school students, any activity related to this TC, which needs support might be considered. The chair added that applying as a group from the TC will be better. Themis Prodromakis reported that Lloyds foundation has some funding for pervasive sensing, energy harvesting and big data.

Pamela added that CAS FEST which is a one day or 2-days meetings did not happen this year. Next year, Pamela would like to suggest topics related to lab-on-CMOS and would like to have an endorsement from this TC.

Tim mentioned that may be we should consider special issue in IEEE sensors journal.

Ralph mentioned that it can be done. Tim added that it can be considered for next year.

Following technical activities meeting – the chair summarized the responsibilities of TCs:

- Awards nominations – this is generally something TCs could/should do. SSTC does not currently do this as a committee. Members should be active in nominating good papers. Also TC can endorse/support IEEE Fellow application (or nomination via chair).
- Conference organization – It has been suggested that the TC should have stronger role in organisation of other IEEE CASS conferences to ensure quality.
- Bylaws – The chair reported that Current governing SSTC bylaws were approved in 2002 and last updated in 2007. The VPTA has just asked to update them to fulfill a mandatory template. No substantial changes are observed except for the election of chair-elect. New Charter must be formally approved by TC members no later than 30 September 2015.

The chair iterated that SSTC should be more pro-active in proposing new activities. She suggested that we should look at areas such as:

- Cooperate in CAS nominations
- Best Paper Awards
- Pro-active in nominating members for position for CAS journals EIC, such as:
TCASI, TCASII, JETCAS, CAS Magazine, TBioCAS, TCSVT

Ralph mentioned that nomination for EIC is open and our committee should play a pro-active role. He added that sensors journal has an urgent need for AEs, Sandro added that there is a lack of AE in emerging fields specially in chemical sensors, mechanical sensors.

The chair also reported a new update related to “IEEE Collabratec” (<https://iee-collabratec.ieee.org/>)

She added that this new initiative is intended to be as a tool or a platform for collaboration between IEEE and non IEEE members. This is similar in its concept to “researchgate”. IEEE is launching this as a pilot project and they are asking for feedback on how to improve the tool.

8. Discussion of ISCAS 2016 activities – special sessions, tutorials, etc

The chair reminded everyone about the important dates for ISCAS 2016:

- **Tutorials** Proposal deadline: September 18, 2015;
- **Special sessions** Proposal deadline: September 18, 2015;
- **Submission deadline of special sessions papers:** October 30, 2015;
- **Live demonstration** Proposal deadline: October 9, 2015;
- **Regular Technical sessions (lectures & posters):** October 9, 2015

The chair encouraged committee members to participate and reminded if anyone has special session and/or tutorial proposals - please send chair and secretary details. These generally need TC endorsement.

9. 2015 SSTC sessions and Best paper awards

The chair reported that:

- SS Track received 51 submissions (3% less than previous year), 25 accepted (49%): 4 oral sessions + 1 poster session
- 3.5 reviews average per paper
- 15 RCMs

She also reported the process of best paper award, which was as follows:

- The top 6 ranked papers in review (e.g. those with all or almost all “Accept” or “Marginal accept” reviews) were passed out to 8 volunteer rankers from SSTC.
- Each volunteer ranked 5 papers so that each paper was ranked by 4/5 reviewers.
- After this procedure, one paper clearly stood out (5 votes out of 6 as best paper) and was selected as the best paper of 2015. The other 5 papers got very similar marks

2015 Track Best Paper award:

There was a large gap between the first and the second ranked papers, so the committee decided to have a single best paper award this year, and the winner paper was:

- “A 1300 x 800, 700 mW, 30 fps Spectral Polarization Imager” Authored by: Missael Garcia, Shengkui Gao, Christopher Edmiston, Timothy York, and Viktor Gruev

Tobi mentioned that the award should be presented during the technical session.

10. AOB

There was no AoB discussed and the meeting concluded at 2:00pm.

Appendix A: Members who attended the 2015 SSTC meeting.

Name	Email	Affiliation
Tim Constandinou (Secretary)	t.constandinou@imperial.ac.uk	Imperial College
Amine Bermak (Secretary-elect)	eebermak@ust.hk	HKUST, Hong Kong University of Science and Technology
Teresa Serrano-Gotarredona (Chair)	terese@imse-cnm.csic.es	IMSC-CNM Seville
Piotr Dudek (Chair-elect)	pdudek@manchester.ac.uk	Univ of Manchester
Andrew Mason	mason@msu.edu	Michigan State Univ
Jie Chen	jchen@eceualberta.ca	Univ of Alberta
Viktor Gruev	gruev@wustl.edu	Washington Univ
Shantanu Chakrabartty	shantanu@wustl.edu	Washington Univ
John Harris	harris@ece.ufl.edu	Univ of Florida
Roman Genov	roman@eecg.utoronto.ca	Univ of Toronto
Jennifer Blain Christen	jennifer.blain@christen.asu.edu	ASU
Tobi Delbruck	tobi@ini.uzh.ch	UZH-ETH
Pamela Abshire	pabshire@umd.edu	UMD
Orly Yadid-Pecht	orly.yadid-pecht@ucalgary.ca	Univ of Calgary
Walter D. Leon-Salas	wleonsal@purdue.edu	Purdue Univ
Themis Prodromakis	t.prodromakis@soton.ac.uk	Univ of Southampton
Jeremy Holleman	jeremy.holleman@uttc.edu	Univ of Tennessee
Arindam Basu	arindam.basu@ntu.edu.sg	NTU Singapore
Nicola Massari	massari@fbk.eu	FBK, Italy
Chiara Bartolozzi	chiora.bartolatti@iit.it	IIT Italy
Christoph Posch	christoph.posch@inserm.fr	UPMC, Paris
Christos Papavassiliou	c.papavas@imperial.ac.uk	Imperial College
Pantelis Georgiou	pantelis@imperial.ac.uk	Imperial College
Tor S Lande	bassen@ifi.uio.no	Univ of Oslo
Francesco Serra-Graells	paco.serra@imb-cnm.csic.es	IHB-CNM(CSIC)
Shih-Chii Liu	shih@ini.uzh.ch	UZH-ETH
Alejandro Linares-Barranco	alinares@atc.us.es	Univ of Seville

Ricardo Carmona Galan	rcarmona@imse-cnm.csic.es	IMSE-CNM
Jonne Poikonen	jokapo@utu.fi	Univ of Turku, Finland
Victor Brea	victor.brea@usc.es	Univ. of Santiago de Conpostela
Ralph Etienne Cummings	retienne@jhu.edu	John Hopkins University
Bernabe Linares-Barranco	bernabe@imse.cnm.csic.es	IMSC-CNM Seville
Philipp Hafliger	hafliger@ifi.uio.no	Univ. os Oslo
Shoushun Chen (secretary- elect)	eechenss@tu.edu.sg	NTU Singapore
Alexander Fish	alexander.fish@biu.ac.il	Barilan University, Israel
Sandro Carrara	sandr.carrara@epfl.ch	EPFL Laussane
Ibrahim (Abe) Elfadel	ielfadel@masdar.ac.ae	Masdar Institute
Wei Tang	wtang@nmsu.edu	NMSU-USA