



**IEEE Signal Processing Society
Sensor Array and Multichannel (SAM) Technical Committee
Minutes of the Virtual Meeting via WebEx
14:00 - 16:00 UTC, Monday 11 May 2020**

Present TC Members:

Fauzia Ahmad, André L.F. de Almeida, Waheed Bajwa, Adel Belouchrani, Alexander Bertrand, Yuejie Chi, Fulvio Gini, Maria Greco, Jarvis Haupt, Eduard Jorswieck, Walter Kellermann, Hongbin Li, Bin Liao, Wei Liu (Vice-Chair), Hassan Mansour, Gonzalo Mateos Buckstein, Vincenzo Matta, Christoph Mecklenbräuker (Chair), Antonio Napolitano, Piya Pal, Ashish Pandharipande, Brian M. Sadler, Gonzalo Seco-Granados, Birsen Yazici, Yao Xie, Xiao-Ping Zhang, Yimin Daniel Zhang.

Student Subcommittee Chair: Herbert Groll.

Associate TC Members: Charles Casimiro Cavalcante, Sundeep Prabhakar Chepuri, Peter Gerstoft, Martin Haardt (past chair), Hagit Messer-Yaron, Sebastian Miron, Zhiguo Shi, Peter Willett (past chair).

Affiliate TC Members: Mohammed Nabil El Korso, Peter Vouras

Guests: Tulay Adali (Vice President-Technical Directions of IEEE SPS)

§1. Welcome

This IEEE SAM TC meeting was originally planned as a face-to-face meeting in Barcelona during ICASSP 2020. Due to global measures for preventing further spread of Covid-19, the ICASSP 2020 became a virtual conference and the IEEE SAM TC Meeting was held as a virtual meeting via WebEx.

This virtual SAM TC meeting was attended by 27 TC members.

Total number of WebEx participants: 39.

The Chair announced the start of the global WebEx meeting and asked attendees to confirm their attendance by email as it was otherwise difficult to keep track of the participants;

Martin proposed a new item in the agenda: Happy birthday to Christoph!

§2. Report from the Chair (Part 1)

§2.1 Membership

The Chair introduced the six new 2020 members, seven retiring members and six re-elected members.

New TC members: Rémy Boyer, Yao Xie, Hassan Mansour, Henry Arguello, Usman Khan, Bin Liao

Retiring TC members: Monica Bugallo, Yonina Eldar, Braham Himed, Jian Li, Chong Meng Samson See, Milica Stojanovic. Martin Haardt (Past Chair).

Returning TC members: Vincenzo Matta, Antonio Napolitano, Pascal Chevalier, Kerain Abed-Merain, Yongwei Huang, Lei Huang.

TC membership statistics: 13 R1-6, 1 R7, 16 R8, 2 R9, 7 R10, 6 Industry/Lab, 34 Academic, 8 female, 32 male.

Two new members Yao Xie and Hassan Mansour were present at the meeting and introduced themselves. The Chair also thanked the Past Chair, Martin Haardt, for successfully chairing the TC for two years, as well as the retiring members for their contributions.

New IEEE SPS rules demand changes in the membership structure of technical committees, more specifically:

- SAM TC members must be IEEE SPS members, they have voting rights, can be members of subcommittees.
- Associate SAM TC members can be members of subcommittees, do not have voting rights.
- Affiliate SAM TC members are not necessarily IEEE members, do not have voting rights.

All three types of SAM TC members together form a pool for reviewing ICASSP, SAM and CAMSAP submissions.

The number of associate TC members is bounded by $\frac{1}{2}$ of the number of (regular) TC members

The terms of the associate TC members are tied to the term of the TC chair

As we have 40 regular members, we can have maximum 20 associate members in future.

This will become effective January 2021

Tulay Adali explained some background and the purpose of this change. As now past members have been listed in separate pages, this associate membership is mainly for simplifying the structure and to get people who are really active and engaged on board.

Discussion:

Martin Haardt raised the question that as a large TC, we may need a larger number of people, much more than 20; Tulay Adali replied that there are different ways to get more people involved in the review process; we could differentiate the active members and non-active members on our website; Walter Kellermann asked about the affiliate members and Tulay Adali mentioned that they are still there and anyone can join as an affiliate member following the procedure on the website.

The Chair pointed out that the official IEEE SPS mailing lists for members, associate members, affiliate members and the publicly visible corresponding lists on our website seem to differ from each other, but this is difficult to check (How are these lists synchronized and who is responsible for this?). Tulay Adali said that this issue would be dealt with in due course.

§2.2 Awards

As in previous years, the SAM TC has been very successful in its award nominations. This year, the following SAM TC nominations have been successful:

Norbert Wiener Society Award goes to Georgios Giannakis

for fundamental contributions to statistical signal processing, especially for networking and communications, and for outstanding mentoring of young researchers.

Carl Friedrich Gauss Education Award goes to Peter Stoica
for sustained contributions to education in the area of image and video processing and understanding

Sustained Impact Paper Award goes to Hamid Krim and Mats Viberg
Two Decades of Array Signal Processing Research: The Parametric Approach, IEEE Signal Processing Magazine, Vol. 13, No. 4, July 1996

Signal Processing Magazine Best Column Award goes to
Emil Björnson, Mats Bengtsson, and Björn Ottersten
Optimal Multiuser Transmit Beamforming: A Difficult Problem with a Simple Solution Structure, IEEE Signal Processing Magazine, Vol. 31, No. 4, July 2014

IEEE SPS Young Author Best Paper Award goes to
Mianzhi Wang and Arye Nehorai
Coarrays, MUSIC, and the Cramer–Rao Bound
IEEE Transactions on Signal Processing, Vol. 65, No. 4, February 2017

Distinguished Lecturers of the IEEE SPS: Ami Wiesel was nominated by SAM TC;
our TC member Xiao-Ping (Steven) Zhang was also successful.

Antonio Napolitano stated that this year's nomination for Distinguished Lecturers will end soon.

Martin Haardt asked if the tenure of current lecturers could be extended by one more year and Tulay Adali replied that they could consider this but we should continue this year's nomination until further notice.

§3. Conference/Workshop Reports

§3.1 ICASSP2020

The Chair gave a summary of ICASSP2020 (page 10 of the slides). It is growing and as a result we need a large number of reviewers. As some members are associated with more than one TCs, they may need to review a large number of papers with a significantly increased workload. This is an issue to be considered. For the SAM technical area, we received 189 submissions, which required 756 reviews. Fortunately, most of the reviews and decisions were finished before the start of the Covid-19 crisis, but due to the uncertainty caused in the coming year, it is difficult to predict what will happen for ICASSP 2021.

§3.2 CAMSAP 2019, Guadeloupe (final report)

The Chair presented a brief final summary of this successful workshop on behalf of the CAMSAP 2019 organizing committee. The acceptance rate is 70% due to high-quality submissions (65% of papers received a rating above 3.0 out of 4.0). Overall it is a success in terms of submissions, attendance and finance (21% surplus; see the slides for details).

Normally about 18 months are needed to prepare for a workshop, which is a good guidance for future workshop organizers, e.g. for CAMSAP 2021.

§3.3 SAM 2020, Hangzhou (migration to virtual conference)

Zhiguo Shi gave a presentation (see the attached slides). It received in total 257 submissions, the largest in SAM workshop history and 167 accepted. The workshop will be held as virtual conference using the Zoom platform.

One member raised a question about the high registration rate of the workshop given that now it is virtual. André de Almeida commented that this registration rate is based on an IEEE approved budget with zero surplus. It is noted that the surplus from other workshops such as CAMSAP 2019 cannot be transferred to other workshops, e.g. SAM 2020, to reduce the registration rate or cover part of the cost. Tulay Adali commented that she would raise this finance related issue in the IEEE SPS board meeting.

§3.3 CAMSAP 2021, Costa Rica (ramp-up)

André de Almeida gave a presentation about this future workshop (see slides). As approved by the SAM TC, it will be held preliminarily on 12-15 Dec 2021, in Costa Rica, which is the most industrialized country in Central America. A plan B may be needed in case of continued travel restrictions next year due to a second wave of Covid-19. There is also a possibility of having a mixed-mode workshop (both virtual and physical).

§4. Proposal for SAM2022 and CAMSAP2023

The Chair encourages the preparation of proposals for SAM 2022 and CAMSAP 2023 workshops.

§5. SPS Activities

§5.1 Data Science Initiative (André de Almeida and Wei Liu): Wei commented that this Initiative has become a technical committee since last year.

§5.2 Challenges and Data Collections (Peter Willett, Christoph Mecklenbräuker): no further update.

§5.3 Unification of EDICS within the SPS:

This has been completed. However, the unification of EDICS is a continuous process and there are procedures available to update the EDICS if needed.

Procedure for continuous updating the unified EDICS:

Either an EiC or a TC Chair can initiate request for a change in EDICS: modification, addition or deletion

Requested changes should reflect the ongoing changes in the field. It is desirable to have the proposals supported by data.

If this is an EiC contacts the VP-Pub and if a TC Chair, contacts VP-TD and the VP makes the connection with the corresponding (most relevant) EiC or TC Chair accordingly working with the corresponding VP. Here, multiple EiCs or TC chairs might be involved if needed.

Once the EiC(s) and TC Chair(s) reach a decision, they send their suggested change to the VP-Pub and VP-TD who together bring the requested change to Executive Committee for approval.

§5.4 SPS Technical Working Groups (TWG)

The proposal for the installation of a TWG on Synthetic Aperture Channel Sounding was prepared by Peter Vouras during late 2019/early 2020 and approved by IEEE SPS on 15 April 2020. which now resides under the SAM TC. The aim of this TWG is to develop rigorous synthetic aperture techniques for

wireless channel sounding at frequencies relevant to 5G cellular communications. Peter Vouras gave a presentation about this new working group (see slides). The work of this TWG will be started in the first TWG meeting on 19 May 2020 which is held via WebEx. The Chair will attend the meeting and asked Peter to extend the meeting invitation to additional members of SAM TC. Birsen Yazici commented that this area also falls into the interests of the geoscience and remote sensing community, much work on airborne and spaceborne platforms is carried out by air force research labs and jet propulsion labs, respectively. However, some of their work may be classified. Peter Vouras stated that all the work in the TWG will be unclassified.

§5.5 Archiving of SAM Workshop Websites

Responsible: Waheed U. Bajwa

Past workshops are often housed on University servers, and eventually are removed.

Lost TC memory (and memories). IEEE is willing to house them, link from web page.

Presently the following workshops have been archived:

SAM 2018

CAMSAP 2017

SAM 2016

CAMSAP 2015

SAM 2014

CAMSAP 2013

CAMSAP 2011

SAM 2010

CAMSAP 2009

CAMSAP 2007

CAMSAP 2005

SAM 2002

To Do: CAMSAP 2019,

Still missing: SAM 2012, SAM 2008, SAM 2006, SAM 2004.

Waheed commented that he has stopped working on all those missing as all leads have died for them. He will do CAMSAP2019 later.

§6. Report from Chair (Part 2)

§6.1 History of ICASSP submissions in the SAM technical area

Annual figures for SAM submissions as a fraction of total ICASSP submissions:

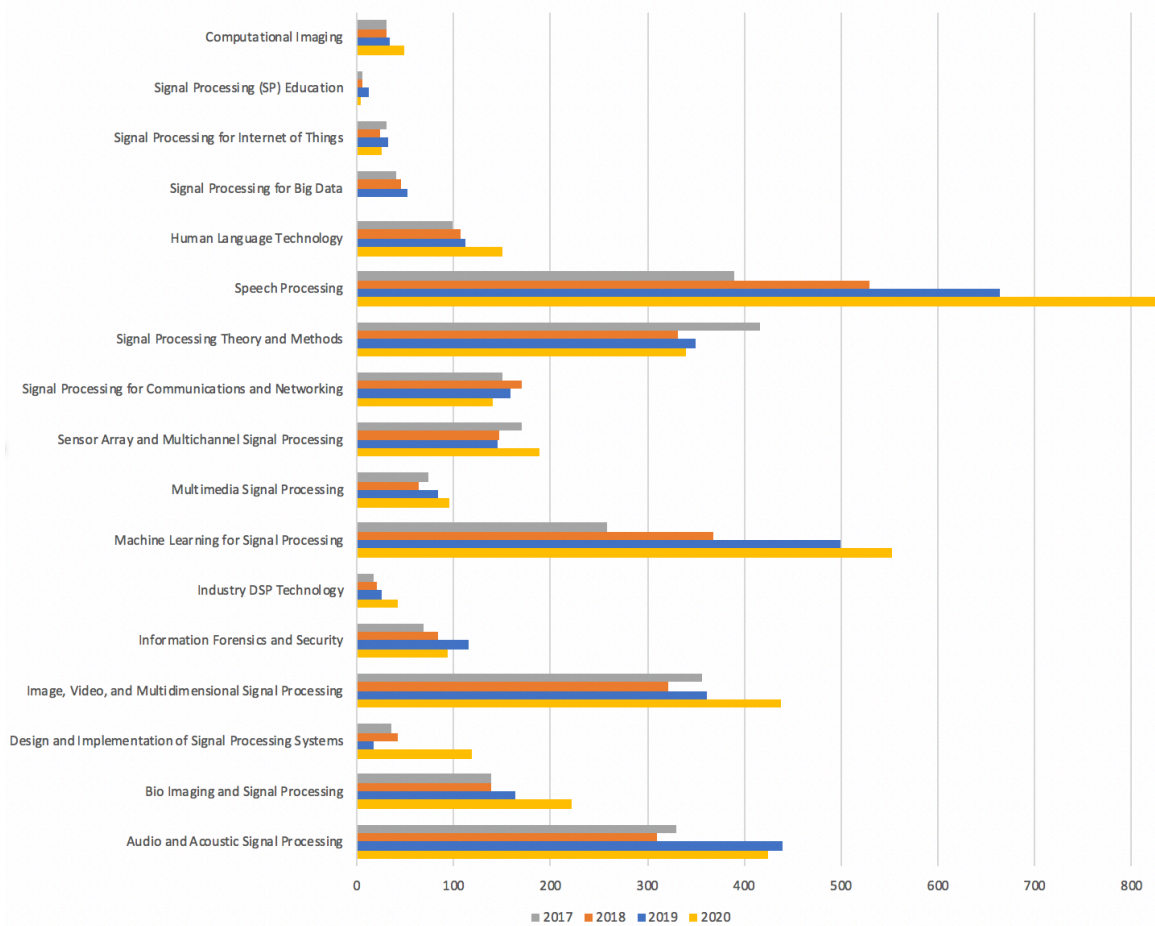
2020: 189 / 3951 = 4.8 %	Barcelona, Spain
2019: 140 / 3510 = 4.0 %	Brighton, UK
2018: 148 / 2738 = 5.4 %	Calgary, Canada
2017: 170 / 2697 = 6.3 %	New Orleans, USA
2016: 200 / 2682 = 7.5 %	Shanghai, China
2015: 212 / 2322 = 9.1 %	Brisbane, Australia
2014: 222 / 3544 = 6.3 %	Florence, Italy
2013: 216 / 3362 = 6.4 %	Vancouver, Canada
2012: 171 / 2615 = 6.5 %	Kyoto, Japan

The number of SAM submissions to ICASSP is increasing again after five years of decline.

§6.2 ICASSP2020 SAM Data

The total number of submissions is 187 plus 2 transferred from other tracks. Page 48 in the Chair's presentation slides is updated for 2020: a bar chart of ICASSP submission counts per TC area during 2017-2020:

ICASSP submission counts per TC area 2017-2020



§7. Subcommittee Reports

Technical Directions: Sabrina commented that no reports are available but they are trying to relate the work of the SAM TC to the general directions of the SPS.

Awards: Commented by Antonio earlier.

Nominations and Elections: Fulvio commented that there would be two new elections: one is new TC Vice-Chair and one is new TC members. Opening for nomination for Vice-Chair starts on 11 July and ends on 21 August; for TC members, it will start on 22 Aug and end in mid-November.

Workshops: André commented that we will start accepting new workshop proposals, and he will send Christoph some related meeting minutes later.

Webmaster: Waheed commented that members of the TC can check their details on our website to see if there are any mistakes. All the meeting minutes are on our website too.

Newsletter: Christoph commented that a newsletter needs to come out in June about awards, ICASSP2020, SAM2020 and other relevant issues.

Membership: No comments.

Industry/Government: No comments.

Education: Adel has no comments; Sabrina commented that the SPS Resource Center always welcomes new materials and ideas of webinars from our committee. Some of the tutorials and plenaries of

some of the past conferences have been available in the resource center already; not sure of those related to ICASSP2020 yet.

§8. Discussion Topics

SP Cup 2020:

Unsupervised abnormality detection by using intelligent and heterogeneous autonomous systems (<https://2020.ieeeicassp.org/authors/sp-cup-2020/>)

SP Cup proposal for 2021:

For undergraduate students

Should be organized by the Student Subcommittee

All TC members can provide input (yes! indeed!)

A playful story seems to be important for acceptance

New suggestion?

Proposal deadline in September 2020

Tasks List 2020-2021 (see chair's slides)

§9. Close of the Meeting

- There will be no meeting during SAM 2020, because that would be too soon to be much useful.
- The SAM TC meeting closed at about 15:40 (UTC).