



IEEE Signal Processing Society
Sensor Array and Multichannel (SAM) Technical Committee
Minutes of the Virtual Meeting via WebEx
14:00 - 16:30 UTC, Tuesday 18 May 2021

Present TC Members:

Elias Aboutanios, Fauzia Ahmad, André L.F. de Almeida, Felix Antreich, Waheed Bajwa, Sundeep Prabhakar Chepuri, Pascal Chevalier, Yuejie Chi, Xiao Fu, Nuria Gonzalez Prelcic, Maria Sabrina Greco (Vice-Chair), Yujie Gu, Walter Kellermann, Aboulnasr Hassanien, Wei Liu (Chair), Hongbin Li, Gonzalo Mateos Buckstein, Hassan Mansour, Christoph Mecklenbräuker (Past-Chair), Antonio Napolitano, Piya Pal, Gonzalo Seco-Granados, Peter Vouras, Yao Xie, Xiao-Ping Zhang, Xiangrong Wang, Xiao-Ping Steven Zhang.

Associate TC Members: Sebastian Miron, Magnus Jansson, Pierluigi Salvo Rossi, Zhiguo Shi, Milica Stojanovic, Stefan Werner, Yiming Zhang

Advisors: Martin Haardt, Michael Zoltowski, Peter Willett

Affiliate Members: Vijaya Nirmala Gera (?), Dehong Liu, Ali Moussa, G. Srinivasa Rao (?)

Guests: Tulay Adali (Vice President-Technical Directions of IEEE SPS), Tsunghui hang (Chair of the TWG-ISAC)

Apologies: Max Wong, Alexander Bertrand

§1. Welcome

The IEEE SAM TC meeting usually takes place face-to-face during ICASSP. Due to global measures for preventing further spread of Covid-19, as in last year, the ICASSP 2021 is 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: 43.

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.

§2. Report from the Chair (Part 1)

§2.1 Membership

The Chair introduced the nine new 2021 members, eight retiring members and four re-elected members.

New TC members: Felix Antreich, Sundeep Chepuri, Xiao Fu, Yujie Gu, Aboulnasr Hassanien, Gang Li, Jun Liu, Peter Vouras, Xiangrong Wang

Retiring TC members: Fulvio Gini, Jarvis Haupt, Eduard Jorswieck, Frederic Pascal, Brian Sadler, Ba-Ngu Vo, Birsen Yazici, Yimin Zhang.

Returning TC members: Angeliki Alexiou, Alexander Bertrand, Nuria Gonzalez Prelcic, Gonzalo Seco-Granados.

TC membership statistics: 14 R1-6, 1 R7, 14 R8, 3 R9, 9 R10; 4 Industry/Lab, 37 Academic; 9 female, 32 male.

The new members Felix Antreich, Sundeep Chepuri, Xiao Fu, Yujie Gu, Aboulnasr Hassanien, Peter Vouras and Xiangrong Wang were present at the meeting and introduced themselves. The Chair also thanked 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, and can be members of subcommittees.
- Associate SAM TC members can be members of subcommittees, and do not have voting rights.
- Affiliate SAM TC members are not necessarily IEEE members, and 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

Currently we have 41 regular members (including the past chair), and 20 associate members. We have also 141 associate members (including 26 student members) and six advisory members (our past chairs, Kon Max Wong, Michael Zoltowski, Kristine Bell, Dominic K.C.Ho, Peter Willett, Martin Haardt).

Discussion:

Martin Haardt suggested an email where we summarize the benefits for the student affiliate members. This will help in increasing their number.

§2.2 Awards

This year the SAM TC proposed 10 nominations and the following ones have been successful:

Carl Friedrich Gauss Education Award goes to Luis Scharf
for sustained contributions to education and mentorship in statistical signal processing

IEEE SPS Young Author Best Paper Award goes to
Bo Li, Athina Petropulu, and Wade Trappe

"Optimum Co-Design for Spectrum Sharing between Matrix Completion Based MIMO Radars and a MIMO Communication System," IEEE Transactions on Signal Processing, vol. 64, no. 17, pp. 4562-4575, Sept 2016

Distinguished Lecturers of the IEEE SPS: we had only one nomination (not successful). For 2022 we have 2 DL candidates for possible nomination and 18 May is the voting deadline for choosing one of them: Yingbo Hua and Sergiy A. Vorobyov.

§3. Conference/Workshop Reports

§3.3 SAM 2020, Hangzhou (final report, see attached file for more details)

Martin Haardt, general co-chair, presented the final report of SAM2020. It was one of the first conferences ran virtually. We had a record of submissions (257 papers) and registrations (1221). The acceptance rate was 44.72%. 90.75% of registrants were non-authors and registered for free.

§3.3 CAMSAP 2023, Costa Rica

André de Almeida explained why, due to the pandemic evolution, the workshop has been moved to December 2023, in the same location in Costa Rica. We hope, for that time, to be allowed to travel everywhere again. The call for paper will be announced in December 2022.

§3.3 SAM 2022, Trondheim (ramp-up)

Pierluigi Salvo Rossi gave a presentation (see the attached slides) on the future SAM 2022 in Trondheim, Norway. The tentative dates are 6-9 June 2022.

Martin Haardt observed that both dates and submission deadlines of SAM 2022 are too close to those of ICASSP in Singapore. He suggested to move SAM 2022 to the end of June.

§4. Proposal for SAM2022 and CAMSAP2023

The Chair encourages the preparation of proposals for SAM 2024 and CAMSAP 2025 workshops.

§5. SPS Activities

§5.1 TWG Synthetic Aperture (Peter Vouras): Peter Vouras presented all the initiatives of the Group focusing particularly on the special issue proposal for JSTSP titled, "Recent Advances in Wideband Signal Processing and Delay Estimation for Classical and Quantum Synthetic Apertures".

Tulay Adali invited Peter to take a more active role in the initiatives related to IEEE SA (Calibration and validation of channel sounding) for which SPS has some available funds.

§5.2 Integrated Sensing and Communication Technical Working Group (ISAC TWG, Tsung-Hui Chang)

Tsung-Hui Chang presented motivations, scope and initiatives of this new TWG and highlighted also the relation with the ComSoC ISAC SIG. Anyone interested in joining the ISAC TWG can contact Tsung-Hui.

§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. These are the unified EDICS for SAM TC:

SAM-APPL	Applications of sensor & array multichannel processing
SAM-BEAM	Beamforming
SAM-CALB	Array calibration
SAM-CSSM	Compressed sensing and sparse modeling
SAM-DOAE	Direction of arrival estimation
SAM-GSSP	Geophysical and seismic signal processing
SAM-IMGA	Inverse methods and imaging with array data
SAM-LRNM	Learning models and methods for multi-sensor systems
SAM-MCHI	Multichannel processing, identification, and modelling
SAM-MAPR	Microphone array processing
SAM-NWAV	Non-wave based array processing
SAM-PERF	Performance analysis and bounds
SAM-SDET	Source detection and separation
SAM-SENS	Multi-sensor remote sensing
SAM-STAP	Space-time adaptive methods
SAM-TNSR	Tensor-based signal processing for multi-sensor systems
SAM-MUCN	Multi-user and cooperative networks
SAM-CAMS	Computational advances for multi-sensor systems
RAS-DTCL	Target detection, classification, localization
RAS-LCLZ	Source localization
RAS-MIMO	MIMO Radar and waveform design
RAS-SARI	Synthetic aperture radar/sonar and imaging
RAS-SONR	Sonar and underwater signal processing
RAS-TRCK	Target tracking
BIO-SENS	Sensor arrays for medical signal and image processing
SPC-MIMO	Multiple-input multiple-output communication systems
SPC-MMIMO	Massive MIMO communication systems

§6. Report from Chair (Part 2)

§6.1 ICASSP 2021 submissions

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

2021: 145 / 3610 = 4.0 %	Toronto, Canada
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

The SAM TC is active and in good shape, but the submissions are not increasing.

§6.2 SAM TC review

The Chair summarized the status of the TC.

Generally, the TC is in a healthy state but some weaknesses were recognized. 1) While SAM TC is proud of its inclusion along gender and regional lines, it has not been as successful with recruiting members from industry and government labs. In terms of student involvement, SAM-TC would like to increase the pool of student affiliate members. 2) The opportunity provided to us in this AI era is also a threat and challenge as the ubiquitous employment of multi-sensor based systems and techniques will also mean that this could dilute the focus of our TC and there will be increasing overlaps between the SAM TC and other committees and societies.

§7. Subcommittee Reports

Christoph updated the subcommittee guidelines file by adding the EDICS subcommittee information. An extensive update/examination of the overall guidelines is needed as the last version was created in 2014 and some of them are outdated. It is expected to finish the update by the next SAM TC meeting during ICASSP2022. A WORD version of the file is available here:

<https://drive.google.com/file/d/14MsPdL34IWBEmGNUVLwFTIAw8wwSvcGw/view?usp=sharing>

§8. Discussion Topics

Possible Online Lecture Series:

We generally agreed that this could be a good way to advertise the TC interests. Whaeed observed that IEEE SPS is already doing a lecture series on its YouTube channel. We could use the same channel. Fauzia observed that it is difficult to organize such live lecture series due to the different time zones of speakers and attendees. She suggested to have a small group working on this organization.

Newsletter:

The Speech and Language Processing TC has its newsletter. We could take inspiration and do the same.

§9. Close of the Meeting

- The SAM TC meeting closed at about 16:30 (UTC).