



**Sensor Array and Multichannel (SAM) Technical Committee
Minutes of the ICASSP 2019 Meeting
Brighton, UK – Thursday 16 May 2019; 11:45 AM - 1:00 PM local time
Brighton Centre, Meeting Room 5**

Present TC Members: Karim Abed-Meraim, Elias Aboutanios, Waheed J. Bajwa, Alexander Bertrand, André L.F. de Almeida, Yonina Eldar, Fulvio Gini, Martin Haardt (Past Chair), Qian He, Lei Huang, Yongwei Huang, Walter Kellermann, Wei Liu (Vice-Chair), Hongbin Li, Gonzalo Mateos Buckstein, Vincenzo Matt, Christoph Mecklenbräuker (Chair), Piya Pal, Frederic Pascal, Gonzalo Seco-Granados, Yimin Daniel Zhang, Xiao-Ping (Steven) Zhang.

Student Subcommittee Chair: Herbert Groll.

Associate TC Members: Peter Gerstoft, Sebastian Miron, Shahram Shahbazpanahi, Sergiy Vorobyov, Peter Willett (Past Chair).

Affiliate TC Members: None

Guests: Xue Jiang, Dehong Liu, Santosh Nannuru, David Brie, Jean-Yves Tournet, Cédric Richard.

§1. Welcome of New TC Members and Short Introduction

This SAM TC meeting was attended by 22 TC members.

Total number of participants: 34.

New TC members: Elias Aboutanios, Adel Belouchrani, Yuejie Chi, Walter Kellermann, Xiao-Ping (Steven) Zhang.

Retiring TC members: Chong Yung Chi, Xavier Mestre, Phil Schniter, Ami Wiesel, Kainam Thomas Wong.

Returning TC members: Maria Sabrina Greco, Fauzia Ahmad, Waheed U. Bajwa, André L.F. de Almeida, Qian He, Hongbin Li, Gonzalo Mateos Buckstein, Piya Pal, Ashish Pandharipande.

TC membership statistics: 14 R1-6, 1 R7, 17 R8, 1 R9, 7 R10; 8 Industry/Lab, 34 Academic; 10 female, 32 male.

§2. Report from the Chair

§2.1 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:

Signal Processing Best Paper Award: Discrete Signal Processing on Graphs: Frequency Analysis, Aliaksei Sandryhaila and Jose M. F. Moura, IEEE Trans. Signal Processing, Vol: 62, No: 12, Jun 15, 2014.

Signal Processing Letters Best Paper Award: On the Performance of Non-Orthogonal Multiple Access in 5G Systems with Randomly Deployed Users, Zhiguo Ding, Zheng Yang, Pingzhi Fan and H. Vincent Poor, IEEE Signal Processing Lett., Vol. 21, No. 12, Dec. 2014.

Signal Processing Magazine Best Column Award: Gaussian Assumption: The Least Favorable but the Most Useful, Sangwoo Park, Erchin Serpedin, and Khalid Qaraqe, IEEE Signal Processing Mag., May 2013.

IEEE SPS Young Author Best Paper Award: Generalized Coprime Array Configurations for Direction-of-Arrival Estimation, Si Qin, Yimin D. Zhang, and Moeness G. Amin, IEEE Trans. Signal Processing, Vo: 63 , No: 6, 2015.

§2.2 Distinguished Lecturers of the IEEE SPS: Anna Scaglione was nominated by SAM TC

§2.3 History of ICASSP submissions in the SAM technical area

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

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 has been declining since 2014 year by year. One reason is that there are many overlapping topics with other TCs. There have been some discussions about how to attract increased submissions, including a change of EDICS to cover more topics related to SAM such as IoT, computational imaging and microphone arrays.

The following bar graph in Figure 1 summarizes the submission counts at ICASSP 2017, 2018, and 2019 to EDICS aggregated by the responsible technical committee. Although the counts as shown are not exact to the last digit, the graph shows a clear trend:

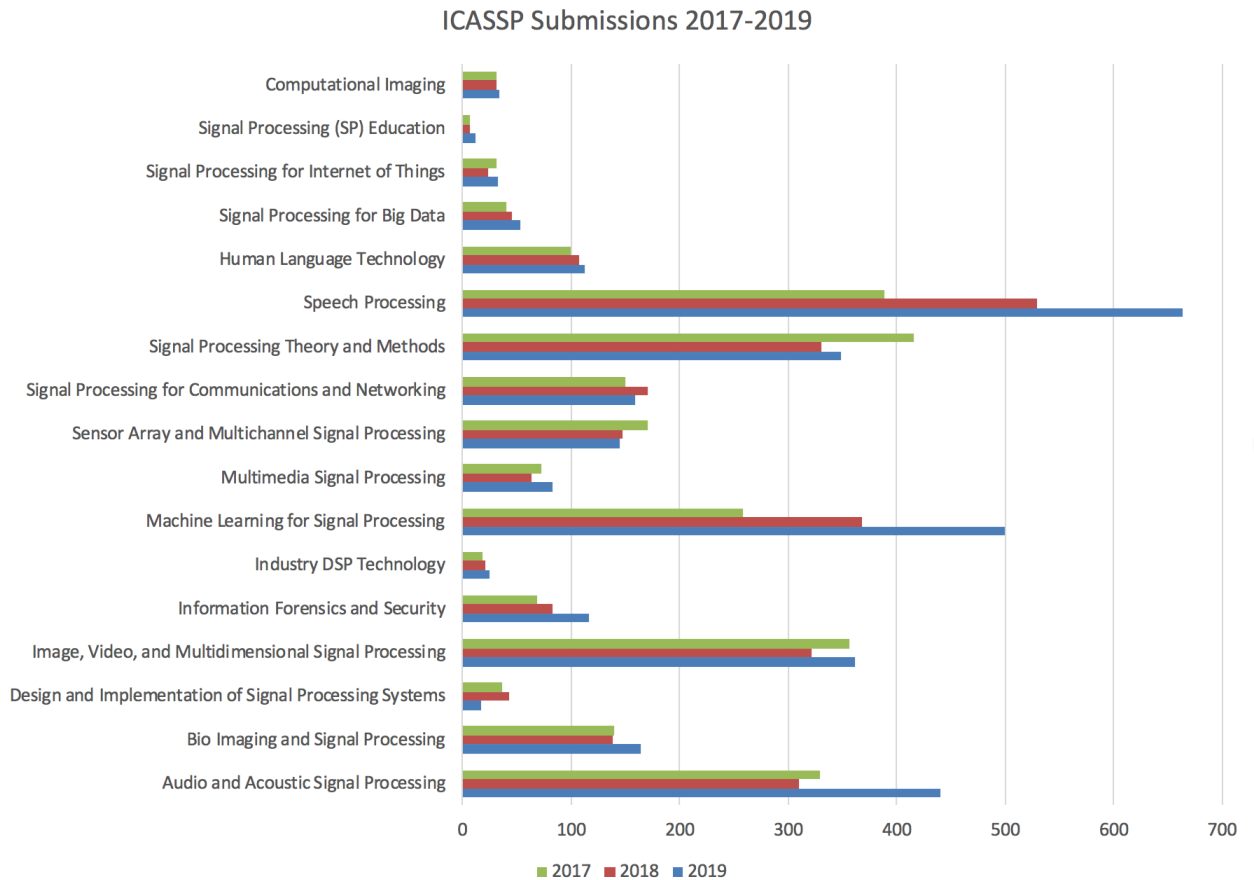


Figure 1: submission counts at previous ICASSPs sorted by responsible technical committee.

§2.4 ICASSP 2019 SAM Data

140 papers submitted (2 were transferred in from other tracks before the review)

77 accepted. This results in a 53 % acceptance rate.

Additionally, there are 5 Signal Processing Letters papers presented in SAM sessions.

Three 6-paper lecture sessions, five poster sessions with 11 to 12 papers each.

- The Industry/Government Subcommittee should discuss strategies to attract more people from industry and government labs.
- Panel discussion at ICASSP 2018 on open problems for industry was organized to attract new interested people and new members from industry

§3. Workshops

§3.1 SAM 2018 report presented by Wei Liu

- SAM 2018 was a very successful workshop held in Sheffield, UK, from July 8-11, 2018.
- 592 contributing authors from 35 countries, with 147 TPC members and 170 other reviewers.
- Number of papers submitted: 170; accepted: 134; acceptance rate: 55%; number of non-presented papers: 5; average number of reviewers per paper: 3.88 (minimum 3 and maximum 6).
- 16 special sessions, 9 regular sessions, 5 plenary talks, 4 tutorials.
- Total income: US\$109952; total expenses: US\$74057; surplus: US\$35895 (32.6%).

- There are two main reasons for the high surplus percentage: Predicted registration income is US\$96242 with 150 registrations, but real registration income is US\$105131 with 167 registrations including 25 full non-IEEE registrations (predicted 2), which leads to an extra registration income of US\$8889; The predicted 3% credit card fee was waived by the University of Sheffield at the end, which provides a saving of US\$3154. These two generated a total extra income of US\$12043. Without this, the surplus would be 21.7%, in line with the original budget prediction of 20% surplus.
- For details please see slides (filename: [Presentation_Post_SAM2018.pdf](#))

§3.2 CAMSAP 2019 planning progress report presented by Jean-Yves Tournet.

This year's CAMSAP will be held at La Créole Beach Hôtel & Spa, Guadeloupe, French West Indies. For details please see slides (filename: [Proposal_CAMSAP2019_ICASSP2019.pdf](#)).

	Location	Submitted	Accepted	Attendance
2009	Aruba	126	103	114
2011	San Juan, PR	133	133	124
2013	Saint Martin	168	125	140
2015	Cancun	154	136	142
2017	Curacao	202	168	196
2019	Guadeloupe	?	?	?

§3.3 SAM2020 will be held at Hangzhou, China on 8-11 June 2020 and Martin Haardt gave a presentation. For details please see slides(filename: [Proposal_SAM2020_ICASSP2019_compressed.pdf](#)).

§3.4 Call for proposals for CAMSAP 2021 were sent out already and there is no proposal on the table yet. At least one proposal will be needed by the time of CAMSAP2019 for discussion and subsequent voting.

§4. SPS Activities

§4.1 Data Science Initiative (André de Almeida and Wei Liu)

The Initiative had a meeting on Friday 17 May and was attended by Christoph Mecklenbräuker, Waheed Bajwa, Frederic Pascal and Wei Liu. Since it was held after the SAM TC meeting, no report was presented during the SAM TC meeting. However, both Frederic Pascal (Vice-Chair of the Initiative) and Walter Kellermann gave an introduction about the background of the Initiative. It was started about two years ago and re-launched after the new Chair for Technical Directions (Tülay Adali) took office (01.01.2019). It is not intended to compete with other TCs, but rather representing interests of other TCs. Currently not many people are involved and more are needed. This initiative is different from the Big Data Special Interest Group.

§4.2 Challenges and Data Collections (Peter Willett, Christoph Mecklenbräuker).

Peter briefly mentioned that the CDC Subcommittee is chaired by Patrick Naylor and any questions can be sent to Patrick directly.

§4.3 Unification of EDICS within the SPS

The overall goal is aligning the EDICS for the IEEE SPS publications and conferences. For that purpose, a new EDICS Subcommittee has been created by the SAM TC and its members are Martin Haardt, Christoph Mecklenbräuker and Wei Liu. Christoph gave a report about the modified SAM-related EDICS structures (see the two documents attached) and it is a work in progress.

Some TC members made some comments about related issues. Martin mentioned if one EDICS is claimed by two TCs, then two reviews could come from one TC and the other two reviews from the other TC; Christoph mentioned that we could ask the submitting authors to propose a TC to handle the review process of their papers (but it is clear from discussions during the Technical Directions Board meeting that this will not be implemented for ICASSP 2020); other members mentioned some new SAM areas such as mobile sensing, IoT, mmWave communications, microphone array processing, etc. The Technical Directions Board meeting agreed a process for regular updates to the EDICS list. See the chair's slides.

§5. Report from Chair (see chair's slides)

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

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

§6. Subcommittee Reports (see chair's slides)

One particular issue is the SP Cup, presented by the Student Subcommittee Chair Herbert Groll.

SP Cup is about real world SP problems, which are targeted for undergraduates with a team size of 5-10 students. Each team has a graduate student and a supervisor. For 2019, only three proposals were submitted. The challenge of 2019 was "Search & Rescue with Drone-Embedded Sound Source Localization", proposed by members of AASP TC. The task for the students was to find the location of a sound source given noisy observations (impulsive noise, non-stationary noise). The data was provided in a simple manner as 8-channel audio recordings from a microphone array mounted on a drone, next to the rotors. The simplicity of the data acquisition allowed students to create very similar data sets with affordable equipment on their own. That way, the problem is more attractive to students due to the playful nature of the challenge. The extendibility of the task towards research may also be important when students wish to follow up on the topic on their own.

Proposal deadline is around early September 2019. Key features for any proposed SP Cup challenge: nice story, real data, simplicity of data (a toy problem), playfulness, potential of splitting the task among team members, extendibility of the task. Proposals should be coordinated within SAM-TC. Contact Herbert Groll if you have suitable ideas.

§7. Interactions with AASP-TC (see chair's slides)

We have a new SAM TC member Walter Kellermann who was a former chair of the AASP-TC and this will further strengthen the interactions between SAM-TC and AASP-TC in the future. One option is the co-sponsorship of SAM workshop. See the chair's slides for further details.

§8. Tasks Ahead (see chair's slides)

§9. Close of the Meeting

- We plan to have the next SAM TC meeting during CAMSAP2019 in Guadeloupe.
- The meeting was adjourned at 13:05 (UK local time).