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Memories From a Historic, Hybrid, Distributed ICASSP

This past May marked the beginning of our return to face-to-face events after almost three years of pandemic-forced virtual-only interactions. The first attempt was the 2022 ICASSP!

Planning for large international events in the era of postpandemic uncertainty is not an easy undertaking. Of course, signal processing is all about dealing with uncertainty—and who would be better at planning than IEEE Signal Processing Society (SPS) people? Indeed, volunteers and staff, under the leadership of Vice President-Conferences Ana Isabel Pérez-Neira, came up with a novel and robust solution, namely, a distributed, hybrid ICASSP. It would have a virtual part and a live part. To minimize travel and travel-induced anxiety, the live part was to occur in two different locations, namely, Singapore and Shenzhen, China. The virtual part and the Singapore parts were completed with great success last May. The China part will happen when COVID-related restrictions in China allow.

I was among the fortunate ones who attended the live ICASSP component in Singapore. The conference was held at the Sands Expo and Convention Center of the magnificent landmark hotel Marina Bay Sands. The program included plenaries by high-profile academics and industry people, panels on cutting-edge topics, tutorials, some oral paper presentations by in-person attendees, ex-hibits, the awards ceremony, and several networking and social events. It also included, for the first time, an entrepreneurship forum and education-oriented short courses.

The talks were excellent and thought provoking, and the panel discussions created great audience engagement. The presentation stage was better than anything I have seen at a conference, organized to perfection by a professional stage crew. Beautiful, vibrant, and high-tech Singapore offered a great backdrop for the organized social events.

There were more than 3,000 registrants, of whom 750 attended live in Singapore. The physical attendees—their excitement at getting together after more than two years of isolation clearly palpable—remained engaged until the very last minute. Several of the ICASSP regulars were missed, but a new, enthusiastic, and full-of-promise audience emerged; 40% of the attendees attended ICASSP for the first time! We hope that these people will decide to make the SPS their professional home.

Entrepreneurship forum

For the first time at ICASSP, there was an entrepreneurship forum, thus making a reality the strategic goal of SPS to create opportunities for signal processing innovation to reach the market and also train a new generation of signal processing entrepreneurs. Organizers Eliathamby Ambikairajah (University of New South Wales, Sydney) and Wilson Teng (National University of Sinapore) led and facilitated this forum with great success and also provided tons of insight on how to sustain and grow it in the future. The entrepreneurship forum was held on the 22 May 2022, right before the ICASSP week. It offered training and interaction with start-up founders and a forum for pitching ideas.

Keynote speaker K.J. Ray Liu, IEEE president and CEO of Origin AI, shared his entrepreneurship journey and the lessons he learned. A panel of successful entrepreneurs spoke about the challenges and opportunities while translating research into commercial applications and bridging the gap from the research lab to a start-up company. There were dual streams including educational talks on bringing an invention to the market and entrepreneurship training. The event culminated with the pitching competition. More than 20 global teams from 11 countries participated in the pitching competition. Among the submissions, six teams were shortlisted to pitch on 22 May 2022 live. Each team was given 5 min to pitch the team proposition while fielding questions from a panel of five judges.

I thoroughly enjoyed the entrepreneurship event. There was a lot of enthusiasm by presenters, panelists, and the audience. The presenters did a very professional job, and their projects were very interesting. The winner received S$10,000, and the runner-up was awarded S$2,500. For this inaugural event, the prize money came from the SPS. Dr.-Ing Stefan Liebich of Elevear from Germany was chosen as

the winner of the pitching competition (see "Elevear") and Sam Van Boheman of Nuroflux as the runner-up (see "Nuroflux").

We plan to build on this successful first event and deliver more entrepreneurship forums at future ICASSPs and ICIPs. We also hope that industry will support us in this endeavor. The event will be offered on demand for SPS members in the SPS Resource Center, and I would encourage all to check it out.

Industry program

Strengthening industry participation in our conferences is a strategic priority for SPS. The industry involvement has progressively increased in the last ICASSPs, and in Singapore, the organizing committee succeeded in incorporating in the program a full parallel industry track, with its corresponding open call for participation. The industry track took place every day of the conference. It included four industry keynotes, delivered by well-known industry speakers, 18 industry expert sessions, two industry workshops, in addition to 18 very successful Show and Tell demos. For future ICASSPs, we envision the industry track to fill in up to half of the ICASSP program, and the 2022 ICASSP has put us on the right path towards that goal.

Education-oriented short courses

Another SPS strategic goal, the SPS Academy, was realized at this ICASSP by offering education-oriented short courses. This vision was developed by the SPS Education Board under the leadership of Vice President-Education Shrikanth (Shri) S. Narayanan, and may revolutionize what the SPS can do in the education/training arena. The courses were more in-depth than tutorials. There were parallel tracks of 10-h courses in three sessions (Tuesday, Wednesday, and Thursday) providing deep and multisided understanding of a topic. Professional development certificates for training hours were provided upon completion of

the course and quiz. These courses will also be offered on demand for SPS members in the SPS Resource Center.

PROGRESS on inclusion

Supporting the SPS goal of making signal processing a more inclusive field, the fourth PROmotinG DiveRsity in Signal ProcESSing (PROGRESS) workshop was held virtually during the ICASSP week. The goal of this workshop is to motivate and support women and underrepresented groups to pursue academic careers in signal processing. A more diverse faculty holds the key to increasing diversity and inclusion because these faculty members will offer role models, draw women and underrepresented groups to the field and inspire them for excellence. The workshop was organized by volunteers S. Farokh Atashzar and Nancy Chen as well as the PROGRESS board, and this year it was supported by the SPS and Google.

The PROGRESS workshop (www.ieeeprogress.org) has now been institutionalized in the SPS, occurring during ICASSP and ICIP. It is overseen by an SPS Membership Board subcommittee with the help of a person appointed by the ICASSP or ICIP conference committee. For the first time, PROGRESS offered a panel on the issues LGBTQ+ faculty face in academia, thus shining the light on a marginalized talent pool. We can tell that a program has been successful when we see people coming to us wanting to join the effort. Indeed, upon the

Cheers! 2022 ICASSP Chair Haizhou Li toasting at the conference banquet.

The 2022 ICASSP closing ceremony.

See you all at ICASSP 2023 in Rhodes Island, Greece!

conclusion of the workshop, members of the IEEE Multimedia Signal Processing (MMSP) Technical Committee came to us wanting to offer a PROGRESS-type workshop during MMSP workshops. We are working on a PROGRESS workshop format that other workshops can be easily deploy, thus making a sustainable contribution to diversity.

Thanks to the outstanding ICASSP 2022 team

Behind this great ICASSP was a team of outstanding volunteers and staff. General Chair Haizhou Li put together a great team of volunteers, which included Sadaoki Furui as cochair and Tsu-han Chen as honorary chair. Planning a three-part technical program came with

its challenges, and Woon-Seng Gan and Kai Kuang Ma invested tireless efforts in arranging a strong program that reflected the hottest trends in signal processing. Lei Wang and Yan Wu kept the conference financially healthy while offering many nice extra conference features, like the virtual tours and in-person networking activities.

The SPS staff did not travel to Singapore. We all missed Caroline Johnson and her team, who had worked very hard with the volunteers in preparing ICASSP, and we also missed SPS staff Theresa Argiropoulos, Rich Baseil, and Debbie Blazek.

There are tons of beautiful photos for the attendees to remember their ICASSP 2022 experience. I am including two to

convey the climate of sheer excitement among the participants.

When this article is published, we will be in the midst of preparations for ICASSP 2023, scheduled to take place on 4–9 June 2023 on the beautiful Rhodes Island in Greece (https://2023.ieeeicassp.org/). General Chair Petros Maragos promises a yet another exciting ICASSP. I look forward to seeing everybody in Greece!

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