

IEEE SSCS Young Professionals and Students: The Future of Our Society

Hello! We want to introduce you to the IEEE Solid-State Circuits Society (SSCS) Young Professionals (YPs) Committee and its initiatives. You might have read about one of our events while looking through the conference program during the IEEE International Solid-State Circuits Conference (ISSCC) or the Very Large-Scale Integration (VLSI) Symposium. Or you might have come across one of our ongoing projects in an SSCS newsletter or in this magazine!

SSCS YPs have been working to serve our membership for the last 12 years. Emre Ayranci founded the SSCS YP Committee and, as he was appointed to the SSCS Executive Committee and the IEEE YP Executive Committee last year, passed the flag of SSCS YP Committee chair to Sevil Zeynep Lulec. Our activities are designed mainly for YPs and graduate students; however, they are open to all members. This article summarizes who we are, what we do, and how the SSCS YP Group became a winner of the 2020 IEEE Young Professionals Hall of Fame Award (Figures 1 and 2)!

Among the more than 10,000 SSCS members across the globe, roughly 30% are YP members who are within 15 years of their first graduation. YPs, together with student members, are the future of our Society. Following through with the commitment of the SSCS to serve our members, the SSCS YPs committee has been addressing the various needs and interests of



FIGURE 1: The official logo of the 2020 IEEE Young Professionals Hall of Fame Award.

the younger members of our Society. Our activities and initiatives focus on empowering YPs by creating opportunities for them to form lasting connections both with their peers and with senior members of our Society. We create platforms to increase visibility, initiate collaboration opportunities, exchange research/business ideas, take advice from senior members, and more. In the following sections, we discuss three of our ongoing initiatives.

Online Mentoring Platform

The IEEE SSCS Mentoring Program is a platform with more than 70 internationally recognized experts and counting, from both industry and academia, who are passionate about helping YPs and shaping the leaders of tomorrow (Figure 3). This Society benefit was launched in May 2020 as the next step of our in-person micromen-

toring sessions at SSCS conferences. Currently, more than 100 mentees all over the world have registered; been matched based on their interests, goals, and background; and received suggestions from our mentors.

The first six-month mentoring session is about to end, with a lot of positive feedback from mentees and mentors alike. For the next session, we will upgrade the platform with integrated chatting and video conference tools, which will further improve the users' experience. We look forward to helping more YPs find their mentors. Please check out this platform, register as a mentor and/or a mentee, fill out your profile, and enjoy the benefits of mentorship from the comfort of your home at your own pace at <https://sscsmentoring.chronus.com/>.

Webinars for Young Excellence

The IEEE SSCS Webinars for Young Excellence (WYE) is a new webinar structure dedicated to helping YP members gain more insight into industrial design practices, collect career advice, present research ideas, and more. The webinar program is held online in a quarterly sequence and is open to all. This series is an enhancement of the existing SSCS Webinar Program, which has a technical focus.

The inaugural webinar, "The Intersection of SSCS and AI—A Tale of Two Journeys," was launched in May 2020 and presented by Prof. Vivienne Sze (Massachusetts Institute of Technology) and Prof. Boris Murmann (Stanford University).

Both speakers shared their personal journeys of getting into the field, their visions on hardware challenges in the era of artificial intelligence, and their projections for future research opportunities in the field.

This was followed by a second webinar, “To Academia, or to Industry, That Is the Question,” held in August 2020 and featuring a live interview with Prof. Kofi Makinwa (TU Delft) and Dr. Shih-Lien (Linus) Lu (Taiwan Semiconductor Manufacturing Company). Through the Q&A format, these two speakers offered valuable advice on careers in industry or academia, how to pick career paths, how to make transitions, and what the tradeoffs are. More than 900 SSCS members and nonmembers have attended these seminars remotely, and the feedback we have received thus far has been extremely positive.

The third webinar, held in November 2020, featured Prof. Bram Nauta (University of Twente) (Figure 4). He offered his insights with “Do’s and Don’t’s of Writing a Good Paper—Recommendations From a Former Editor in Chief.”



FIGURE 2: The 2020 IEEE Young Professionals Hall of Fame Award.

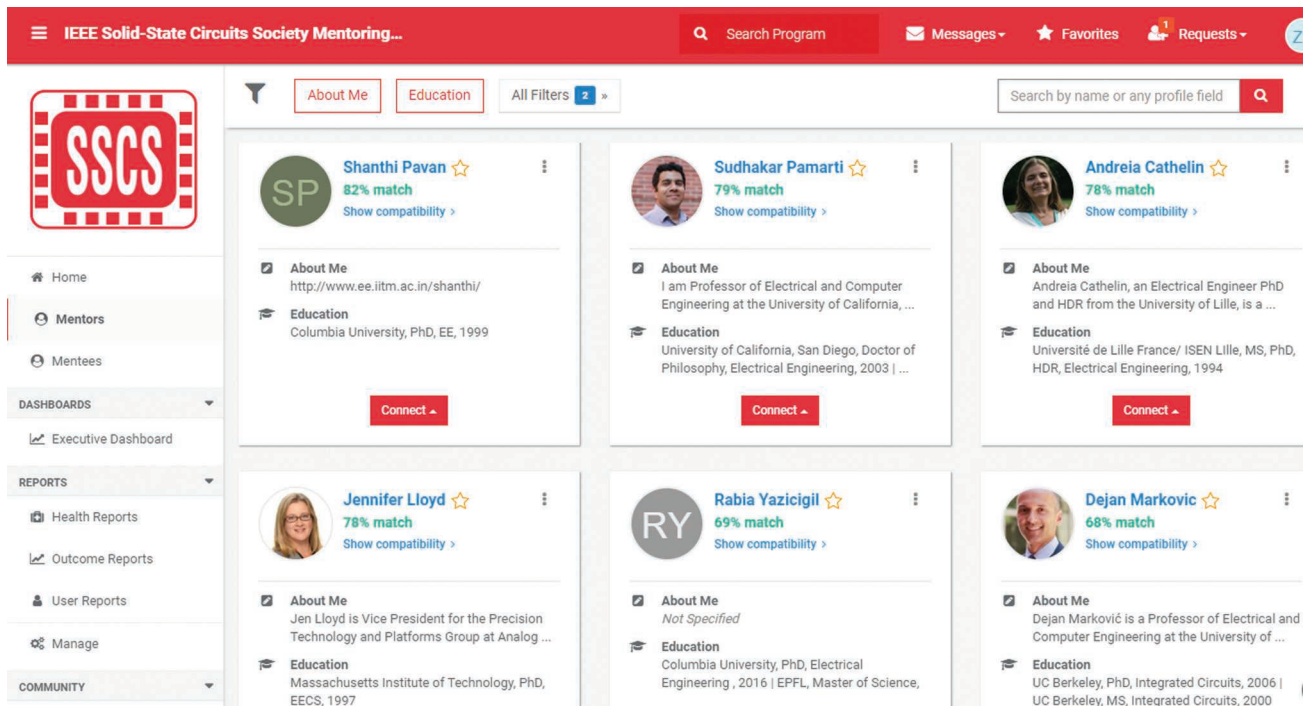


FIGURE 3: The SSCS Mentoring Platform.

Webinars for Young Excellence (WYE) Program Presents



Do's and Don'ts of Writing a Good Paper -- Recommendations from a former Editor in Chief

Presenter: Bram Nauta
Friday, November 13, 2020
10:30 AM EST

FIGURE 4: The SSCS Webinars for Young Excellence, November 2020.

For upcoming webinars, we have selected a mixture of topics that span career navigation, research tips hot research topics, cutting-edge advances in solid-state circuits and systems on chip, and interdisciplinary practices. Please reach out to us with the topics you would like to listen to. To learn more about the WYE and the upcoming series, you can visit <https://sscs.ieee.org/membership/young-professionals/webinars-for-young-excellence-wye-program>. All past webinars are available at the SSCS YouTube channel: <https://www.youtube.com/c/IEEESolidStateCircuitsSociety/videos>.

In-Person and Online Mentoring and Networking Sessions

For more than a decade, we have been organizing micro-mentoring and career coaching sessions, initiated and hosted by Emre Ayranci, in conjunction with SSCS-sponsored conferences around the world. These mentoring events are our flagship activity and have become a tradition over the years (Figure 5). The in-person sessions are open to all YPs and graduate students (Society members or not) living in the area in addition to the conference attendees. These sessions present a great networking opportunity among YPs along with the mentoring sessions. Our

mentors are from different technical backgrounds, and we also try to maintain diversity in terms of affiliation (industry/academia/entrepreneurship), gender, and region of the world. We collaborate with the IEEE Electron Devices Society, the SSCS Women in Circuits Committee, local SSCS Chapters, and conference organizers, which results in different event formats.

In 2020, as the worldwide trend moves toward virtual conferences and events, we also shifted our flagship event to virtual. Our first completely online mentoring event was organized as a part of the 2020 VLSI Symposium (Figure 6). We had more than 90 attendees, 16 of whom were mentors, for this event. The virtual mentoring event included parallel breakout sessions led by each mentor with the goal of two to six mentees at each room/breakout session. Mentees were free to float in between rooms and talk to different mentors throughout the event, similar to our in-person mentoring sessions. Our aim was to create a welcoming, more informal environment, where mentees had a whole hour to ask their questions and make connections with the world's leading experts. Following a session during the 2020 Asian Solid-State Circuits Conference in November 2020, our upcoming online mentoring session will be a part of ISSCC 2021. Further details



FIGURE 5: The ISSCC micro-mentoring and career coaching session, February 2020.



FIGURE 6: SSCS mentors at the VLSI Symposium YP mentoring event, June 2020.

are available through the conference and SSCS websites.

Who We Are

Currently, SSCS YP members comprise mainly 1) academia researchers such as junior faculty members, graduate students, and postdoctoral fellows and 2) industrial researchers such as junior engineers. The SSCS YP Committee also includes a combination of industry and academia professionals from different backgrounds to cover the interests of all SSCS YPs (Figure 7). The following committee members have been instrumental in the projects mentioned previously as well as upcoming ones, from which our membership will benefit in 2021:

- Emre Ayranci, immediate past YP chair, pSemi
- Damla Dimlioglu, student representative, Cornell University
- Sijun Du, member, University of California, Berkeley
- Xinfei Guo, WYE coordinator, Nvidia
- Hui Jiang, online mentoring coordinator, Delft University of Technology

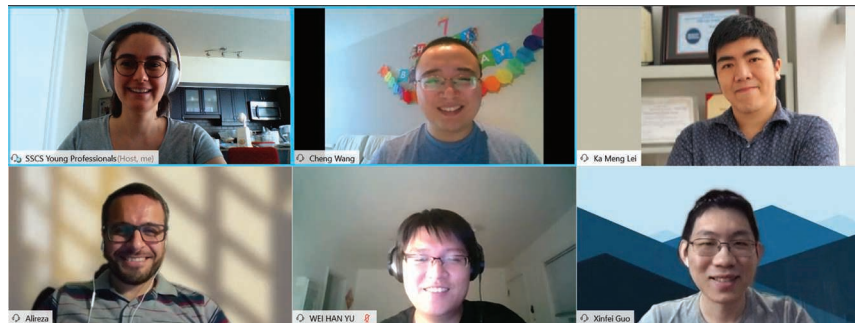


FIGURE 7: Members of the SSCS YP Committee meeting in October 2020.

- Rabia Tugce Yazicigil Kirby, Women in Circuits representative, Boston University
 - Ka-Meng Lei, WYE coordinator, University of Macau
 - Sevil Zeynep Lulec, chair, Analog Devices
 - Kamala Raghavan Sadagopan, member, Oregon State University
 - Korkut Kaan Tokgoz, member, Tokyo Institute of Technology
 - Cheng Wang, member, Analog Devices
 - Alireza Yousefi, online mentoring coordinator, Syntiant Corporation.
- You can learn more about upcoming events through the *SSCS Newsletter*, the SSCS LinkedIn group, and the

SSCS website at <https://sscs.ieee.org/membership/young-professionals>. Please contact us for suggestions on activities and for volunteer opportunities.

We want to especially thank Abira Altvater, Camilo Vélez Cuervo, Alvin Loke, Shahriar Mirabbasi, Kelsey Rodriguez, Po-Hsuan Wei, and Milin Zhang for their contributions on various projects. Together, let's keep our future as bright as ever!

—Sevil Zeynep Lulec
Xinfei Guo
Ka-Meng Lei
Alireza Yousefi
Hui Jiang
SSC