

of **3D Circuits**, by Carolina Metzler and Ricardo Reis (UFRGS) and the last one on **Machine Learning application on EDA**, by Renan Oliveira Netto (UFSC).

The program also included a 4-hour hands-on tutorial using the tools from the OpenRoad Project, given by Eder Monteiro, 3 poster sessions and 3 panels, and a talk about **the benefits of IEEE/CASS-CEDA membership** by José Rodrigo Azambuja (UFRGS/CASS) and José Luís Güntzel (UFSC/CEDA). The panels focused on topics that could motivate the participants, mostly undergraduate and graduate students, to target their future careers to the EDA area. Therefore, the first panel, chaired by Cristina Meinhardt (UFSC) and Leomar S. Rosa Jr. (UFPE), counted with the participation of young researchers who reported their trajectories in EDA companies abroad. In the second panel, chaired by Gracieli Posser (Cadence) and Cristina Meinhardt (UFSC), the various Brazilian students who have participated in EDA contests reported how those experiences have leveraged their research and increased their skills in the area. Finally, in the third panel, chaired by Daniel Barcelos (CEITEC), professionals from IC Design and EDA companies talked about challenges and opportunities in next generation EDA tools, including career perspectives. The participants of this panel were Marcelo Silva (Cadence), Victor Grimblatt (Synopsys), Murilo Pessatti (Chipus), and Bernardo Culau (Silvaco).

With this program, we also achieved a surprising result: reconnecting us with former students formed in Brazilian institutions who are currently working in EDA companies around the world. EDAS2020 full program and more details are available at the EDAS website, including all posters and videos, as well the best posters: ecl.ufsc.br/edas and on our Facebook page: www.facebook.com/edas.ufsc/.

III. Conclusions

The first IEEE CASS/CEDA Seasonal School on Electronic Design Automation was successful, having 215 participants from several locations. Participants asked for a second edition of EDAS. In August 2022, a face-to-face edition of the IEEE/CEDA International Seasonal School on Physical Design Automation (PDA2021) is likely to occur in Florianópolis, Brazil. It will be the 4th edition of a series that began in 2017 at Porto Alegre (Brazil), followed to Chiayi (Taiwan) in 2018 and to Beijing (China) in 2019.

Acknowledgment

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Women in Circuits and Systems (WiCAS) and Young Professionals (YP) at ICECS 2020

A “Women in Circuits and Systems” (WiCAS) event and a “Young Professionals” (YP) event took place during the 27th IEEE International Conference on Electronics Circuits and Systems (ICECS), the flagship conference for the Region 8 of the IEEE Circuits and Systems Society (CASS).

The WiCAS events traditionally aim to inspire and motivate both students and young professionals in the domain of circuits and systems to have efficient roles in their professions, by meeting successful female engineers and professors, through interesting technical and professional talks in fields of interest of CASS. The YP events usually include start-ups presentation, poster and demo sessions, aiming to provide a thrilling environment for early career researchers to present their work. Joining this event, young professionals have the opportunity to learn about state of the art and most

advanced activities in the area of circuits and systems, meet and interact with their peers, receive feedback from internationally well-known experts in the CASS domain from both academia and industry.

The ICECS 2020 WiCAS event was held on November 24th, 2020, organized by Dr. Erika Covi (NaMLab, Germany), Dr. Giulia Di Capua (University of Salerno, Italy), and Dr. Melika Payvand (ETHZ, Switzerland).

The WiCAS event included a panel discussion, driven by the theme “Inspiring stories of women’s success in STEM”. The event involved the participation of four recognized speakers, both from academia and industry: Prof. Teresa Serrano-Gotarredona (National Microelectronics Institute, Seville, Spain), Dr. Angeliki Pantazi (Research Manager at IBM, Zurich, Switzerland), Dr. Chiara Bartolozzi (Italian Institute of Technology, Genoa, Italy), and Dr. Elham Ebrahimi (Comms Technical Lead at Spire, Edinburgh, United Kingdom). As women in leadership positions with proven excellent record of accomplishment in fields of interest of the

IEEE CASS, the WiCAS panelists shared precious experiences and advices with the conference attendees. The speakers not only shared their personal journey and the path to their success, but also their research interest. Their research and experience spanned from analog/mixed-signal design and neuromorphic engi-

neering, all the way to emerging technologies and even space applications. The panel discussion was a lively session on the impact of gender gap and cognitive biases in women's career.

The ICECS 2020 YP event was held on November 25th, 2020, organized by Dr. Nazila Fough (Robert Gordon

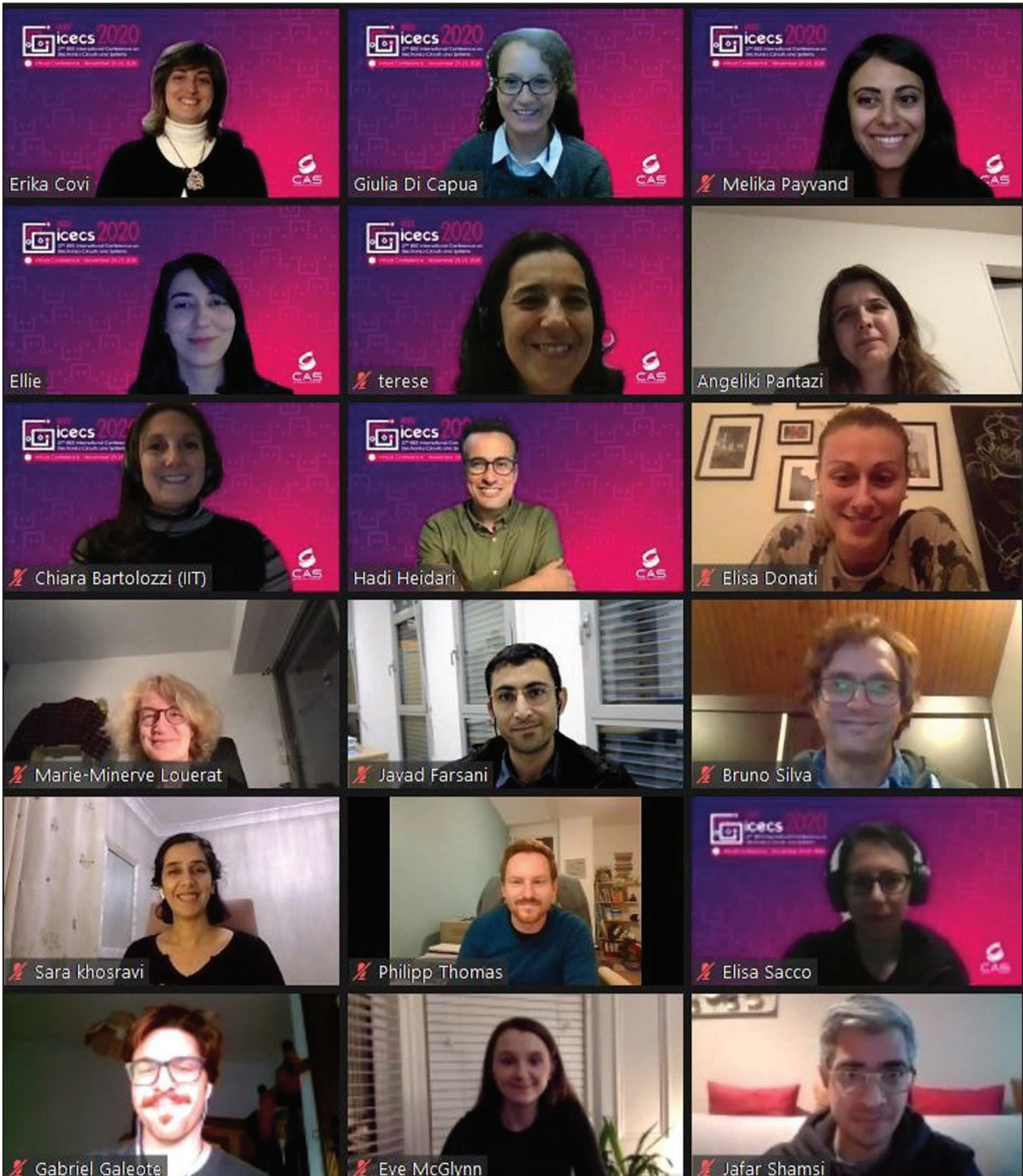


Figure 1. Some attendees of the WiCAS session.

WiCAS events aim to inspire and motivate both students and young professionals in the domain of circuits and systems to have efficient roles in their professions.

University, United Kingdom) and Dr. Giulia Di Capua (University of Salerno, Italy).

The YP event included welcoming talks about IEEE, IEEE YP and IEEE CAS, generously provided by Dr. Mona Ghassemian (IEEE UK & Ireland section chair), Dr. Vinko Lešić (IEEE YP Region 8 chair), Prof. Izzet Kale (IEEE UK & Ireland vice-chair and CAS Chapter-chair) and Prof. Tony Davies (IEEE R8 History Activities coordinator). A discussion session on how to get research works successfully published was also organized, thanks to the amazing contributions of Dr. Hakim Meskine (Advance Electronics Materials Editor in Chief, Wiley) and Dr. Charles Glaser (Springer Nature Editorial Director). After these talks, a YP demo session and a YP poster session took place. The

YP track was open to students, new lecturers and early career researchers, who had the opportunity to present their research work, stay technically up-to-date and learn about future challenges in CASS domain.

During the conference, awards were assigned for the best contributions presented in the WiCAS and YP competitions. All WiCAS and YP winners were announced during the ICECS 2020 awarding ceremony.

Twenty-seven papers were accepted for the WiCAS competition, and three awards were assigned. A “1st Runner-Up Paper Award” was assigned to Dr. Saman Fatima, a Doctoral Researcher at the University of Paris Saclay (France), for the paper titled “A CMOS Readout Circuit for a Low Shunt Resistance IR photo-Detector.”



Figure 2. Some attendees of the YP session.

YP events include start-ups presentation, poster and demo sessions, aiming to provide a thrilling environment for early career researchers to present their work.

A “2nd Runner-Up Paper Award” was assigned to Ms. Eve McGlynn, a PhD Student at the University of Glasgow (United Kingdom), for the paper titled “Encapsulated Magnetolectric Composites for Wirelessly Powered Brain Implantable Devices.” A “Best Paper Award” was eventually assigned to Dr. Fanny Spagnolo, a Postdoctoral Researcher at the University of Calabria (Italy), for the paper titled “A High-Performance and Power-Efficient SIMD Convolution Engine for FPGAs.”

Twelve papers and four demo presentations were accepted for the YP competition, and three YP awards were eventually assigned. A “Best Demo Award” was assigned to Dr. Jason Eshraghian, a Post-Doctoral Fellow at the University of Michigan (U.S.A.), for the live demonstration titled “Prosthesis Control Using a Real-Time Retina Cell Network Simulator.” A “Best Presentation Award” was assigned to Ms. Elena-Diana Șandru, a PhD student at the University Polytechnic of Bucharest (Romania), for the poster titled “Machine Learning-Based Local Sensitivity Analysis of Integrated Circuits to Process Variations.” Finally, a “Best Paper Award” was assigned to Mr. Kosuke Uchiyama, a PhD student at the Nagoya University (Japan),

for the poster titled “Design of Fully-Integrated Self-Powered FM Transmitter Using On-Chip Photodiodes in 65-nm CMOS.”

The WiCAS and YP winners received a one-year IEEE plus IEEE CASS membership, thanks to the generous support provided by the IEEE CASS. Moreover, as a sign of appreciation to all 2020 WiCAS and YP participants, the WiCAS co-chairs and the YP co-Chairs were pleased to grant a 25 USD voucher for CAS-related technical books to all speakers who gave live presentations during the conference days.

The WiCAS and YP co-chairs express their gratitude to the ICECS 2020 general co-chairs, Prof. Hadi Heidari and Prof. Elena Blockina, and to the conference organizing committee, for the technical support received in the definition of the WiCAS and YP sessions. The WiCAS and YP co-chairs would also like to thank the IEEE Circuits and Systems Society for the financial support that helped making these events a great moment of professional and personal enrichment.

Many thanks to Giulia Di Capua, Melika Payvand, Erika Covi and Nazila Fough who contributed to this report.

Ricardo Reis, *Senior Member, IEEE*

2021 IEEE CASS Rio Grande do Sul Webinars

Last year, the IEEE CASS Rio Grande do Sul Chapter and the Graduate Program on Microelectronics (PGMICRO) of the Universidade Federal do Rio Grande do Sul (UFRGS) transformed Local Face-to-Face Seminars into Global Webinars. A report about this action was published in the IEEE CASS Magazine, 4th quarter, 2020 [1]. All 2020 webinars were recorded and they are available at the IEEE CASS Rio Grande do Sul YouTube channel (www.youtube.com/cassriograndedosul)

In February 5th, it was started the season 2021 of the IEEE CASS Rio Grande do Sul webinars, with a talk by prof. **Subhasish Mitra** (Stanford University, USA), with the title **21st-Century NanoSystems for Abundant-Data Computing: The N3XT 1,000X** [Fig. 1].

Then, the following invited talks were organized in 2021 or are scheduled:

Prof. Hai “Helen” Li (Duke University, USA), Efficient Deep Learning at Scale, February 12

Prof. Ricardo Reis (UFRGS, Brazil), Challenges in the Design of Integrated Systems for IoT, Feb. 19

Prof. Rajesh K. Gupta (UC San Diego, USA), Programming Human Spaces, February 26