

Women in circuits and systems (WiCAS) at NEWCAS 2023.

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Women in Circuits and Systems (WiCAS) at NEWCAS 2023

The WiCAS and Young Professionals events were hosted during the 21st IEEE Interregional NEW-CAS Conference in Edinburgh, U.K., on the 26th of June 2023. These events were organised by the WiCAS and Young Professionals Co-Chairs Dr. Nazila Fough (Robert Gordon University, U.K.), Dr. Hamida Hallil Abbas (University of Bordeaux, France), Eve McGlynn (University of Glasgow, U.K.), and Mahdieh Shojaei Baghini (University of Glasgow, U.K.). The invited speakers and WiCAS banquet were supported by the Standing Committee on Diversity, Equity, and Inclusion of IEEE CASS. Using the conference website and various social media accounts, the sessions were promoted to registered attendees and the general public. Email invitations were targeted towards early career researchers who were most likely to attend both sessions.

The WiCAS panel discussion began with presentations from the invited speakers. Based on the topic of “There’s More Than One Way to a STEM Career,” the speakers illustrated their professional journeys with personal examples of decision making and the impact of personal circumstances on their career path. For example, the speakers discussed how their curiosity led them to switch disciplines, how they adjusted their work life around a growing family, and how location played an important role in which job opportunities they accepted.

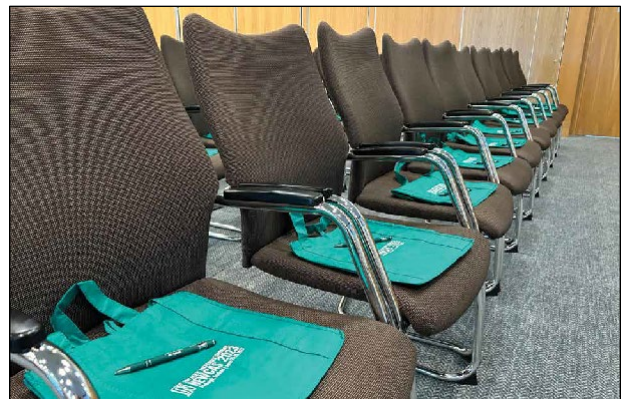
All three speakers provided a different perspective. Dr. Carol Marsh OBE (Celestia U.K.) has alternated between academia and industry throughout her career in FPGAs, all the while promoting diversity and inclusion. Dr. Nagham Saeed (University of West London) has ascended to Assistant Professor and encouraged other women through her work with IEEE WiE (Women in Engineering). Dr. Mary Dysko (University of Glasgow) has returned to academia after a career break with the assistance of the Daphne Jackson Trust and has worked in multiple fields under the STEM banner such as astronomy, medical ethics, and ultrasound. All three have achieved engineering excellence while balancing career and family. Importantly, all three speakers had experience with promoting women in STEM. While their

stories served as inspiration for attendees, the speakers discussed their opinions on diversity and inclusion as a wider topic.

Both men and women benefited from the question-and-answer session which followed. Questions from the audience focused on challenges the speakers had faced as women in engineering, how to overcome them, and how to make strong connections with colleagues. There was a particular emphasis on finding colleagues who are open to discussing equality and diversity issues, especially acknowledging the role of men in encouraging diversity. Since many women take career breaks or follow a less linear route through the hierarchy of companies and universities, the discussion also covered how age plays a role in workplace bias. Institutions should consider how older candidates, sometimes termed late-career Early Career Researchers in academia, may have untapped potential.

The Young Professionals session provided an opportunity for early career researchers to submit a two-page paper rather than a full four-page submission.





This is crucial for Ph.D. students who are unable to attend conferences without an accepted paper, which is a common practice for many universities and funding bodies. The excellent work showcased during this session highlighted the importance of encouraging early career researchers to communicate their work and begin to build their professional network. Future collaborations and opportunities are often fostered during face-to-face meetings such as conferences, where researchers can make personal connections with their peers. This is especially important for Ph.D. students to feel part of a wider community of engineers and boost their career opportunities.

The keynote for the YP session was delivered by Dr. Wai Keung Fung (Cardiff Metropolitan University) on the topic of "Strategies for addressing reviewer expectations and feedback in developing publications/proposals." While this engaging presentation was valuable to researchers at any stage in their career, it was particularly of interest to younger researchers who lack experience with high impact journals and major funders. Attendees were asked to list the attributes a reviewer might look for in a publication or proposal and encouraged to view feedback as a chance for growth and improvement.

Attendees were gifted with promotional merchandise. A WiCAS/YP banquet was hosted in appreciation of invited speakers and presenters. It was attended by the two keynote speakers who participated in-person. Students and early career researchers were able to continue their discussions with the experienced engineers in an informal environment.

On the final day of the conference, four awards were presented, with the winners receiving a certificate and Amazon gift voucher to the value of £25. The WiCAS Best Poster winner Dhanashree Boopathy was chosen based on the strength of her presentation skills and the novelty of her first-author paper “High-Precision Time-to-Digital Conversion for Calibration of Outphasing Radio Transmitters.” Reviewer and WiCAS/session Chair scores were combined to select the WiCAS Best Paper: Elmira Moussavi’s “Gate Camouflaging Using Reconfigurable ISFET-Based Threshold Voltage Defined Logic.” Members of the organizing committee selected the YP Best Poster, “Energy-Efficient and High Speed Active Cell Balancing Methodology for Lithium-Ion Battery Pack” by Dr. Rashi Dutt, and co-chairs in attendance at the YP session chose Dr. Itamar Levi and Oren Ganon’s presentation on “Modular Processor Architecture with Cryptography ISA Extensions” as YP Best Paper. The certificates were awarded during the closing session of the conference by keynote speaker Professor Maryam Shojaei Baghini.

The WiCAS and YP organisers wish to thank the IEEE DEI Committee for their support, without which these incredible events could not have taken place. The organisers are also grateful to the speakers, YP presenters and session attendees. Finally, thanks to the General Co-chairs of NEWCAS 2023, Dr. Srinjoy Mitra and Prof. Hadi Heidari for including these sessions in the conference program.

Many other students are taking important technical or management roles in the industry, such as Amazon, Arista, Bloomberg, Broadcom, Cadence, Google, IBM, KBC, Meta, NVIDIA, and a number of exciting startups. They were the driving force behind our research programs at UCLA over the past three decades. Witnessing their successful careers and leadership positions fills me with immense pride and joy and underscores the profound impact of mentorship in academia.

In short, I think that success is not merely measured by personal accolades, but by the enduring influence of one’s work and the accomplishments of those they have had the privilege to mentor and guide.

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