DATE 2022 conference – round three for the DATE community to virtually discuss the latest trends in electronic system design and test.

April 2022

After two years of virtual conference editions, DATE had planned a special format for its 2022 edition, aiming at bringing back the community together again, trying to balance the uncertainty of the situation and the desire to be partially back in presence. A special programme has been organized to start the conference with two days in presence, full of outstanding talks and moments to meet and chat. However, the lasting impact of covid-19 infections across Europe and the consequent travelling/quarantine restrictions adopted by authorities still have a strong impact on the health concerns and travelling opportunities for speakers as well as attendees. After thoughtful discussion, the DATE Committees opted to also move DATE 2022 to a completely virtual event.

As the world's favourite electronic systems design and test conference, DATE provides an international platform to discuss electronic design, automation, and test, from system-level hardware and software implementation right down to integrated circuit design. This year, the conference was held as a virtual live conference from 14 to 23 March 2022 which offered an exciting, wide-ranging technical programme.

To kick off DATE 2022, Valeria Bertacco (University of Michigan, US) invited the audience to look beyond AI and find societal opportunities in the power of hardware design and electronic design automation in her opening keynote talk. Edoardo Charbon (EPFL, CH) focussed his opening keynote on the development of "Cryo-CMOS Quantum Control from a wild idea to working silicon".

Initially planned to be in person, DATE 2022 dedicated its first two days to the conference's focus topics "From Quantum to Neuromorphic Computing" and "Interpretable AI and Nanoelectronics-Based Designs of edge computing systems in the IoT 2.0 Era" as well as sessions the special initiative "Autonomous Systems Design."
In addition to sessions focussing on these topics, three renowned lunch keynote speakers inspired DATE 2022 participants. Silvia Bodoardo (Politecnico di Tornio, IT) discussed how the future of battery technology can contribute to a greener connected world and Georges Gielen (KU Leuven, BE) explored the edge of edge AI. As part of the special initiative "Autonomous Systems Design", Wolfram Burgard (TU Nuremberg, DE) presented "Probabilistic and deep learning techniques for robot navigation and automated driving" during his lunch keynote talk.

Following the days of the focus topics, 61 technical sessions provided a discussion platform for subjects from the four areas:

D – Design Methods & Tools

A – Application Design

T – Test and Dependability

E – Embedded Systems Design

as well as results and lessons learned from Multi-Partner Projects (MPPs).

The programme was complemented by the Young People Program which offered several initiatives targeting PhD students with the goal of increasing their visibility, establishing contacts, and encouraging discussions about their future perspectives with experts of the field. This included the PhD Forum, where PhD students were able to present their work, the BarCamp – an interactive open research meeting – a sponsorship fair to seek funding for student projects as well as a career fair with panels about career perspectives. Moreover, the University Fair allowed faculties to promote and advertise open positions for prospective PhD students and researchers.

Delegates also experienced six in depth technical tutorials that covered topics such as energy-efficient AI; hyperdimensional computing; inferencing on embedded systems; PDKs for integrated sensor platforms; high level synthesis for data science applications; quantum computing and approximate computing.

Ten workshops finally rounded off the scientific programme, dealing with various hot topics such as 3D integration; European automotive reliability, test and safety; neuromorphic computing, open-source hardware European alliances and iNitiatives; cross-layer algorithm and circuit design; data-driven applications; silicon life cycle management; ferroelectronics; sustainability and security as well as autonomous systems design as part of the special initiative.

Adding to the scientific programme, DATE 2022 considered social discussions by hosting the forum on advancing diversity in EDA (DivEDA) as well as a panel on how post-pandemic conferences will look like.

The DATE Organising Committees would like to thank all speakers, sponsors, and participants for their contribution to yet another unique edition of DATE and are very much looking forward to hosting DATE 2023 as an in-person conference in Antwerp, BE, from 17 to 19 April 2023 to provide networking moments and social activities finally again for the community.

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