

Recap of the 29th Edition of the Asia and South Pacific Design Automation Conference (ASPDAC 2024)

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■ **THIS YEAR, THE** 29th Asia and South Pacific Design Automation Conference (ASP-DAC 2024) was fully in-person after the COVID-19 pandemic. The conference was held from Monday, 22 January 2024 to Thursday, 25 January 2024, at Songdo Convention Center, Incheon, South Korea.

Jointly sponsored by IEEE and ACM, ASP-DAC is a high-quality and premium conference on electronic design automation (EDA). The sister conferences are the Design Automation Conference (DAC) that takes place in June; Design, Automation and Test in Europe (DATE) that takes place in March; the International Conference on Computer-Aided Design (ICCAD) that takes place in November; and Embedded Systems Week (ESWEEK) that takes place in October. ASP-DAC started in 1995 and has continuously offered opportunities to learn about recent advanced technologies in large scale integration (LSI) design and design automation areas and to increase communication between researchers and designers around Asia and South Pacific regions.

ASP-DAC 2024 received 482 submissions from all over the world, which was ever the highest submission record. Based on rigorous and thorough reviews and a full-day face-to-face meeting of the Technical Program Committee in early September in Taiwan, 139 articles were accepted and 36 technical sessions were organized. Five special sessions were also organized based

on invited talks by the Technical Program Committee. The hot topics were, as usual, the machine learning/artificial intelligence (ML/AI)-based optimization by many authors of technical sessions and the applications for large language model (LLM) in the special session offered by D. Chen.

We arranged four keynote sessions at the beginning of each day to learn about the future directions of this area. The first keynote address was “Advanced Technology and Design Enablement” by Dr. Sei-Seung Yoon of Samsung Foundry, South Korea. Dr. Yoon mentioned the importance of design and technology co-optimization (DTCO). The second one was “Present and Future Challenges of High-Bandwidth Memory” by Dr. Myeong-Jae Park of SK Hynix, South Korea. Considerable attention was given to the HBM technology in SK Hynix. The third keynote address during the banquet was “AI/ML and EDA: Current Status and Prospectives on the Future” by Prof. Andrew B. Kahng of the University of California San Diego, USA. The fourth keynote address on the last day was “Unleashing the Future of IC Design with AI Innovation” by Dr. Erick Chao of Cadence Design Systems, Taiwan.

The Designers’ Forum was a unique program that shared design experience and solutions for actual product designs of the industries. The topics discussed in that forum included Next-Generation AI Semiconductor Design, Heterogeneous Integration and Chiplet Design, and AI/ML for Chip Design and EDA—Current Status and Future Perspectives from

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Diverse Views. Additionally, a joint short workshop of AI-EDA and TILOS Projects in a two-session format was held on the last day of the conference. The University Design Contest was also an important annual event of ASP-DAC where nine high-quality designs all including actual silicon proof were selected for presentation at the conference.

Eight tutorials were arranged on Monday, 22 January. Each tutorial had a 3-h presentation. Registrants were allowed to choose one topic from the morning session including four topics and another one from the afternoon session including four topics depending on their interests and could obtain a wider perspective on the recent hot topics with the reduced tutorial fee. Among them, considerable attention was given to the hands-on tutorial “CircuitOpt and OpenROAD” offered by A. B. Kahng and V. A. Chhabria.

ASP-DAC 2024 OFFERED an ideal opportunity to talk about recent technologies and future directions in the LSI design and design automation areas. We are grateful to our ASPDAC 2024 sponsors (IEEE CEDA and ACM SIGDA), industrial sponsors (Cadence and Synopsys), and volunteers for making this year’s conference successful. The members of the executive committee, the technical program

committee, and numerous reviewers and volunteers have spent an enormous effort to prepare the program. The ASP-DAC 2025 will take place in Tokyo in January 2025. Your active submissions are highly appreciated, and we welcome participants from all over the world. ■

Taewhan Kim is a professor at the School of Electrical and Computer Engineering, Seoul National University, Seoul 08826, South Korea. His current research interests include computer-aided design of integrated circuits ranging from the architectural synthesis through physical designs, specifically focusing on logic and physical synthesis, and cell layout generation. Kim has a BS in computer science and statistics and an MS in computer science from Seoul National University and a PhD in computer science from the University of Illinois at Urbana-Champaign, Urbana, IL, USA.

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