December 2022 CEDA Currents
IEEE Council on Electronic Design Automation

Congratulations to Fellow Class of 2023!

IEEE Fellow is a distinction reserved for select IEEE members whose extraordinary accomplishments in any of the IEEE fields of interest are deemed fitting of this prestigious grade elevation.

IEEE CEDA is honored to have elevated six members to the distinction of IEEE Fellow for 2023. Please help us in congratulating the following individuals on this achievement:

Norman Chang
for leadership in the physical-level sign-off of Electronic Design Automation for SoC/ 3DIC

Ryan Kastner
for contributions to the design and security of reconfigurable systems

Sung Kyu Lim
for contributions to electronic design automation and the tradeoff for 3-dimensional integrated circuits

Sherief Reda
for contributions to energy-efficient and approximate computing

Fung Yu Young
for contributions to electronic design automation in VLSI physical design

Zhiru Zhang
for contributions to field-programmable gate array high-level synthesis and accelerator design

Visit the CEDA website to view a full list of CEDA Fellows. You can nominate a deserving colleague here.

2022 ACM/SIGDA CEDA ICCAD: Recap

The ACM/IEEE International Conference on Computer-Aided Design was held in San Diego, California from 30 October-4 November. The event brought together over 500 attendees from around the world, both virtually and in-person. Attendees were able to witness three stimulating keynote talks, fifty-five technical sessions, seven different workshops, three different contests, the first ever job fair, and many other networking opportunities.

2023 ICCAD will be held on 28 October-2 November 2023 in San Francisco, California, USA. We look forward to seeing everyone again at this event!

Watch the Virtual Distinguisher Lecturer Webinar from 31 October

Did you miss the Virtual Distinguished Lecturer from 31 October? The talk was provided by Anupam Chattopadhyay on “Electronic Design Automation for Emerging Technologies (Tutorial).” Watch here.

The Virtual Distinguished Lecturer Program (VDLP) allows us to continue to serve the CEDA participants and give the electronic design automation community the opportunity to hear from our respected Distinguished Lecturers.

Registration is free for all webinars. If you are unable to attend the "live" virtual events, the presentations will be available on our Presentation Library and the CEDA YouTube channel after the event.

Watch the CAD for Assurance Webinars

The CAD for Assurance webinar series is an educational initiative that provides CEDA members with access to relevant CAD tools to use. This includes information on major CAD tools the research community has developed over the past decade, including open-source license-free or ready-for-licensing tools, associated metrics, relevant publications, and video demos.

The 2022 series concluded on 7 October with presentations from Nils Albartus on DANA: Universal Data Flow Analysis for Gate-Level Netlist Reverse Engineering and Jonathan Cruz on Hardware Trojan Benchmarks: From Chips to PCB. Watch the CAD for Assurance Webinar here.

Call for Papers: Design & Test Special Issue on the Post-Quantum Cryptography for Internet-of-Things (IoT)

A time frame of 10-15 years is predicted by many researchers for the wide-spread deployment of quantum computers. They are poised to break all mainstream public-key cryptographic schemes, which are currently used in many industrial control networks, public key infrastructures (PKI), and blockchain-based technologies. In 2014, the National Institute of Standards and Technology (NIST) suggested that a quantum computer capable of breaking RSA could be built by 2030. The National Security Agency (NSA) warned in 2015 that progress in quantum computing has reached a point that organizations should start deploying encryption algorithms designed to withstand attacks performed on quantum computers. Since 2020, there has been a final recommendation from NIST for stateful hash-based signatures and a total of seven finalists for public-key encryption, key encapsulation mechanisms, and digital signatures. Two key aspects to enable a smooth transition from current cryptographic algorithms, such as RSA and ECC, to post-quantum algorithms are implementation security and performance.

The deadline to submit is 1 January 2023. Read more on the CEDA website.

2022 CEDA Awards

Congratulations to the 2022 Council on Electronic Design Automation Award Recipients on these remarkable achievements. Thank you for your hard work, dedication, and contributions to the EDA Community!

2022 Fellows: Sung Kyu Lim, Sherief Reda, Fung Yu Young, Zhiru Zhang, Norman Chang, and Ryan Kastner

Outstanding Service Recognition: Rolf Dreschler (ICCAD), Tishihiro Hattori (ASP-DAC), Franco Fummi (DATE), Harry Foster (DAC), and Andreas Gerstlauer (ESWeek).

Phil Kaufman Award for Distinguished Contributions to the EDA: Dr. Giovanni De Micheli

A. Richard Newton Technical Impact Award: "Efficient Steady-State Analysis based on Matrix-Free Krylov-Subspace Methods"

William J. McCalla ICCAD Best Paper: "Attack Directories on ARM big.LITTLE Processors," "SpecPart: A Supervised Spectral Framework for Hypergraph Partitioning Solution Improvement," and "On Reconfiguration-Oriented Approximate Adder Design and Its Application"

Transactions on Computer-Aided Design Donald O. Pederson Best Paper Award: "Compact-2D: A Physical Design Methodology to Build Two-Tier Gate-Level 3-D ICs"

Ernest S. Kuh Early Career Award: Bei Yu

A history of past recipients, nomination forms, and guidelines for eligibility can be found on the CEDA Website.

Find us online at **ieee-ceda.org**

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