IEEE Symposium on Low-Power and High-Speed Chips and Systems

COOL Chips 27

CALL FOR PARTICIPATION

COOL Chips is an International Symposium initiated in 1998 to present advancement of low-power and high-speed chips and systems. The symposium covers leading-edge technologies in all areas of microprocessors and their applications. The COOL Chips 27 is to be held on April 17-19, 2024, and is targeted at the architecture, design and implementation of chips with special emphasis on the areas listed below.

- **Low Power-High Performance Processors and Systems for AI, IoT, Multimedia, Digital Consumer Electronics, Mobile, Graphics, Encryption, Robotics, Automotive, Networking, Medical, Healthcare, and Biometrics.**
- **Novel Architectures and Schemes for Single Core, Multi-Core, Embedded Systems, Reconfigurable Computing, Grid, Ubiquitous, Dependable Computing, GALS and Wireless.**
- **Cool Software including - Parallel Schedulers, Embedded Real-time Operating System, Binary Translations, Compiler Issues and Low Power Application Techniques.**

Dates and Location

April 17 (Wed) – 19 (Fri), 2024

Takeda Hall, The University of Tokyo, Bunkyo-ku, Tokyo, Japan

Keynote Presentations

- "Accelerating AI with Analog In-Memory-Computing", ***Stefano Ambrogio*** *(IBM Research)*
- "Energy-Efficient Heterogeneous Photonics for Next Generation AI and Hardware Accelerators", ***Stanley Cheung*** *(Hewlett Packard Enterprise)*
- "Intel Foundry Advanced Packaging and Test: Enabling Disaggregation in AI and PC", ***Peng Chunqing*** *(Intel)*
- "Processing-in-Memory: from Technology to Products", ***Kyomin Sohn*** *(Samsung Electronics)*
- "Hot AI by COOL SoCs", ***Hoi-Jun Yoo*** *(KAIST)*

Special Invited Presentation

- "Achieving the most energy-efficient compute fabric for ML and HPC using of thousands of RISC-V cores", ***Dave Ditzel*** *(Esperanto Technologies)*

Panel Discussion

- Topics: "Exploring the Potentials, Limitations, and Challenges of PiM (Processing-in-Memory) and CiM (Computation-in-Memory)",
  Moderator: ***Yasuhiko Nakashima*** *(NAIST)*
  Panelists: ***Stefano Ambrogio*** *(IBM Research),*
  Yu-Guang Chen *(Nat'l Central Univ.),*
  Kyomin Sohn *(Samsung Electronics),*
  Hoi-Jun Yoo *(KAIST)*

Special Sessions (invited lectures)

- "Navigating Aging Realities: Integrating Reliability into Cutting-Edge Computing Systems", ***Andy Yu-Guang Chen*** *(Nat'l Central Univ. Taiwan)*
- "Radiation-hardened circuit design for space application", ***SinNyoung Kim*** *(IMEC)*

(in alphabetical order)

For detailed and up-to-date information, please visit
< https://www.coolchips.org/ >

Symposium Registration

In order to make a registration, please visit COOL Chips 27 web site: **< https://www.coolchips.org/ >**

== REGISTRATION FEES ==

Registration Fees include a copy of the proceedings (copies of speakers' slides) of all plenary and technical sessions and special sessions presented on April 17-19, 2024.

(including tax)	**Early** Registration by **April 5,** 2024	Late Registration from April 6, 2024
Member of any of IEEE, IEICE or IPSJ	44,000 yen	55,000 yen
Student (Member)	15,000 yen *1	19,000 yen *1
Life/Retired (Member)	15,000 yen	19,000 yen
Non-Member	55,000 yen	70,000 yen
Student (Non-Member)	19,000 yen *1	23,000 yen *1

***1** Non-author students are FREE (0 yen)

== PAYMENT ==

Only credit cards via Whova Registration-site

Note: Credit card charges will be billed in Yen.

== PARTICIPATION ==

Participation information will be provided severally by email from COOL Chips 27 no later than April 16.

== CONTACT to ==

Organizing Committee Secretaries
E-mail:cool_27@coolchips.org
https://www.coolchips.org/

Sponsored by the Technical Committees on Microprocessors and Microcomputers and Computer Architecture of the IEEE Computer Society.
In cooperation with the IEICE Electronics Society and IPSJ.

(As of April 10, 2024)