

## 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 21 is to be held in Yokohama on April 18-20, 2018, 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 18 (Wed) – 20 (Fri), 2018**

**Yokohama Joho Bunka Center, Yokohama, Japan**  
(Yokohama Media & Communications Center, Yokohama, Japan)

### Keynote Presentations

- "AMD EPYC Microprocessor Architecture",  
**Jay Fleischman** (Advanced Micro Devices, Inc.)
- "AI Chips for all Future AI Algorithms",  
**Oskar Mencer** (Maxeler Technologies / Imperial College London)
- "Designing Deep Neural Network Accelerators with Analog Memory – A Device and Circuit Perspective",  
**Prithish Narayanan** (IBM Research – Almaden)
- "Tensor Processing Unit:  
A Processor for Neural Network Designed by Google",  
**Kaz Sato** (Google, Inc.)
- "Designing a Power and Energy Stack for Exascale Systems",  
**Martin Schulz** (Technische Universität München)
- "Unlocking Hidden Performance:  
Examples from FPGA-Based Neural Nets",  
**Ephrem Wu** (Xilinx, Inc.)

### Invited Presentation

- "RISC-V"(tentative), **Yunsup Lee** (SiFive)

### Panel Discussion

- Topics: "Challenges to the Scaling Limits:  
How Can We Achieve Sustainable Power-Performance Improvements?",  
Organizer/Moderator: **Koji Inoue** (Kyushu University)

### Special Sessions (invited lectures)

- "Energy-Efficient and Energy-Scalable Processing – Meeting the Varied Needs of the Internet of Things at Its Edge",  
**Massimo Alioto** (National University of Singapore)
- "High-Power-Efficiency Implementation of Neuromorphic Computing Systems with Memristors",  
**Yiran Chen** (Duke University)

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

### Symposium Registration

In order to make a registration, please visit COOL Chips 21 web site: < <http://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 18-20, 2018.

(including tax)	Early Registration by April 6, '18	Late Registration from April 7, '18
Member of any of IEEE, IEICE or IPSJ	44,000 yen	55,000 yen
Student (Member)	15,000 yen	19,000 yen
Life/Retired (Member)	15,000 yen	19,000 yen
Non-Member	55,000 yen	70,000 yen
Student (Non-Member)	19,000 yen	23,000 yen

== **PAYMENT** ==

- On-site cash payment
- Credit cards  
-- VISA/Master Cards are only acceptable

Detailed information is available on the web site.

**Notes:**

1. Credit card charges will be billed in Yen.
2. Personal checks, bank drafts, and traveler's checks are not acceptable.

### Accommodations

== **HOTEL RESERVATIONS** ==

A special group rate is available for COOL Chips 21 attendees for Hotel Monterey Yokohama and Hotel New Grand.

== **CONTACT to** ==

COOL Chips 21 Organizing Committee Secretaries  
E-mail: cool\_21@coolchips.org <http://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.

