# 2024 International VLSI Symposium on Technology, Systems and Applications

April 22-25, 2024 Hsinchu, Taiwan

VLSI SINCE 1983

## Monday, April 22

| Time | Ballroom A 10th Floor | Ballroom B 10th Floor | Ballroom C 10th Floor |
|---|---|---|---|
| 13:30 – 18:15 | **Tutorial 1** Emerging High Performance, Energy- Efficient CMOS Materials and Device<br>**15:30-15:50 Break** | **Tutorial 2** Advanced Interconnect and Packaging Technologies<br>**15:00-15:20 Break** | **Tutorial 3** Design of Data-Intensive Computing Architectures<br>**15:00-15:15 Break** |

## Tuesday, April 23

Ballroom A+B / 10th Floor

09:00 – 10:10: **Opening & Award Ceremony**

10:30 – 12:10: **J1: Plenary Session**

**10:30 J1-1**
IOWN, Photonics Technology Enables Next Generation Sustainable ICT Infrastructure
**Yosuke Aragane,** NTT

**11:20 J1-2**
CMOS Device Scaling by Nanosheet-based Device Architectures
**Naoto Horiguchi,** imec

12:50 – 13:40: **T1: Poster Session** (Ballroom D / 11th Floor)
**Time for exchanging ideas with the poster presenters**

| Time | Ballroom A 10th Floor | Ballroom B 10th Floor | Ballroom C 10th Floor | Ballroom D 11th Floor | Mezzanine A+B 13th Floor |
|---|---|---|---|---|---|
| 13:40 – 17:30 | **T2** **Paper Session** 3D Integration<br>**15:00-15:20 Break** | **J2** **Joint Special Session** Energy-efficient Technologies<br>**15:10-15:30 Break** | **D1** **Paper Session** High-speed Circuits for Wireline Communication<br>**15:00-15:30 Break** | **T1** **Poster Session** | **T3** **Paper Session** Memory for Computing<br>**15:00-15:20 Break** |
| | **T4** **Special Session** Novel Quantum Computing Devices and Materials | | **D2** **Paper Session** Novel Accelerator Designs for Image Processing and AI | | **T5** **Paper Session** Ferroelectric Material & Memory |

## Wednesday, April 24

Ballroom B / 10th Floor

08:30 – 10:10: **J3: Plenary Session**

**08:30 J3-1**
Ferroelectrics for Enhanced Semiconductor Devices
**Thomas Mikolajick,** TU Dresden & Namlab

**09:20 J3-2**
Enabling AI Revolution Through Innovations in Advanced Packaging & Chiplet Technology
**Raja Swaminathan,** AMD

12:50 – 13:30: **J4: Luncheon Keynote** (Ballroom B / 10th Floor)
Baseball Technology Innovations and Fan Engagement
**Cheng-Wen Wu,** Southern Taiwan University of Science and Technology

| Time | Ballroom A 10th Floor | Ballroom B 10th Floor | Ballroom C 10th Floor | Ballroom D 11th Floor | Mezzanine A+B 13th Floor |
|---|---|---|---|---|---|
| 10:20 – 12:00 | **T6** **Paper Session** Embedded Memory and Sensor | **T7** **Special Session** 3D Transistor Generation-Device Technology and Application | **T8** **Paper Session** Power Device/Circuit and Energy | **D3** **Special Session** Reliability | **D4** **Paper Session** New Paradigm for Physical Design Automation |
| 13:40 – 17:30 | **T9** **Special Session** Emerging Technologies for High-performance Computing<br>**15:10-15:30 Break** | **J5** **Joint Special Session** Power Devices and Electronics<br>**15:10-15:30 Break** | **D5** **Paper Session** Advanced Analog Circuit Techniques<br>**15:00-15:30 Break** | **D6** **Paper Session** Verification & Test for Secure and Energy-Efficient Systems<br>**15:00-15:30 Break** | **D7** **Paper Session** AI Accelerator<br>**15:00-15:30 Break** |
| | | | **D8** **Special Session** High-Performance Computing for AI | **D9** **Paper Session** Optimization and Enhancement for Neural Networks | **D10** **Paper Session** Digital Circuit |

## Thursday, April 25

Ballroom B / 10th Floor

08:30 – 10:10: **J6: Plenary Session**

**08:30 J6-1**
Latest Trends in Technological Development Related to SiC Power Semiconductors
**Yasunori Tanaka,** AIST

**09:20 J6-2**
3D Stacking Process Technologies for Advanced CMOS Image Sensors
**Yoshihisa Kagawa,** SONY

| Time | Ballroom A 10th Floor | Ballroom B 10th Floor | Ballroom C 10th Floor | Ballroom D 11th Floor | Mezzanine A+B 13th Floor |
|---|---|---|---|---|---|
| 10:20 – 12:30 | **T10** **Paper Session** IGZO Devices | **T12** **Special Session** Advanced Memory Technology<br>**11:50 END** | **D11** **Special Session** Edge Computing<br>**11:50 END** | **D12** **Industrial Session** Advanced Automotive Electronics for Vehicles | **D13** **Paper Session** Emerging Technology and Applications<br>**11:20 END** |
| | **T11** **Paper Session** BEOL Technology | | | **D14** **Industrial Session** AI-assisted Electronic Design Automation | |

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