

# Novel Materials and Devices for Neuromorphic Applications

## 6th September 2024

### Program

10:20  
– 16:20

- 10:20 – 10:30 Opening Remarks
- 10:30 – 12:00 Session 1
- 12:00 – 13:00 Lunch break
- 13:00 – 14:30 Session 2
- 14:30 – 14:45 Coffee break
- 14:45 – 16:15 Session 3
- 16:15 – 16:20 Closing Remarks

### Speakers

#### Session 1

 **Takashi Tsuchiya, NIMS**

Physical Reservoir Computing Utilizing Spatio-Temporal Dynamics of Ions, Electrons, and Spins

**Min-Hung Lee, National Taiwan University**

Analog-Based Synapse of Ferroelectric HfO<sub>2</sub> Transistors for Neuromorphic Computing

#### Session 2

**Jung-Yao Chen, National Cheng Kung University**

Non-Volatile Photomemory with Ultrafast and Multi-Level Memory Behavior

**Megumi Akai, Osaka University**

Conducting Polymer Wire Network and Physical Implementation of Reservoir Computing for Neuromorphic Wetware

#### Session 3

 **Ryoma Hayakawa, NIMS**

Antiambipolar Transistors: A New Strategy for Multifunctional In-Memory Logic Circuits

**Yen-Fu Lin, National Chung Hsing University**

Ambipolar 2D transistors: Shaping the Future of Electronic Devices

#### Sponsor

This workshop is supported by the JST SICORP Program



Venue | Auditorium, 1F, WPI-MANA Bldg., Namiki  
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