

# Synchrotron Frontier 2026 PROGRAM

March 11th (Wednesday), 2026

- 9:30 – Coffee
- Chair : Kazuhiko Komatsu
- 10:00 – 10:05 **Opening Address**  
Hiroo Yugami (Executive Vice President)  
*Tohoku University*
- 10:05 – 10:10 **Opening Address**  
Akinori Ito (Dean of the Graduate School of Engineering)  
*Tohoku University*
- 10:10 – 10:20 Group photo
- 10:20 – 10:55 Oversea Invited  
**On-Chip & Near-Sensor Computing for X-ray Detectors**  
Kazutomo Yoshii  
*Argonne National Laboratory*
- 10:55 – 11:30 Oversea Invited  
**Spectromicroscopy for Chemical and Electronic Structure Analysis of Transition Metal Chalcogenides**  
Sarah Harmer  
*Flinders University*
- 11:30 – 13:30 **Lunch Break**
- Chair : Masako Suzuki
- 13:30 – 14:00 Domestic Invited  
**Photoemission spectromicroscopy using measurement Informatics for quantum materials research**  
Hideaki Iwasawa  
*National Institutes for Quantum Science and Technology*
- 14:00 – 14:30 Domestic Invited  
**AI-Driven Analysis of EELS/XAFS for Exploring Synchrotron Frontiers in Materials Design**  
Teruyasu Mizoguchi  
*University of Tokyo*

- 14:30 – 15:00 Domestic Invited  
**Exploring High-Throughput Processing and Data Compression at the Edge Through Custom Computing**  
Tomohiro Ueno  
*RIKEN*
- 15:00 – 15:20 **Coffee Break**
- Chair : Hideaki Iwasawa
- 15:20 – 15:50 Domestic Invited  
**Advanced Photoemission Microscopy at NIMS: From Instrumentation toward Materials Science**  
Koichiro Yaji  
*NIMS*
- 15:50 – 16:20 Domestic Invited  
**Combined Molecular Dynamics and Synchrotron X-ray Analysis of Structure–Property Relationships in Thermoset Resins**  
Yoshiaki Kawagoe  
*Tohoku University*
- 16:20 – 16:50 Domestic Invited  
**Statistical machine learning for microscopy data analysis**  
Motoki Shiga  
*Tohoku University*
- 16:50 – 17:20 Domestic Invited  
**Control and Elucidation of Electronic Functionality in Next-Generation Semiconductor**  
Ryu Yukawa  
*Tohoku University*
- 17:20 – 17:40 **Wrap-up**

8:30 –	<b>Coffee</b>
	Chair : Yuta Saito
9:00 – 9:30	Domestic Invited <b>Fugaku NEXT Project: Challenges for Post-Exascale Supercomputing in Japan</b> Kentarō Sano <i>RIKEN</i>
9:30 – 10:10	Oversea Invited <b>From local structure to programmable resonant photonics</b> Robert Simpson <i>University of Birmingham</i>
10:10 – 10:40	Domestic Invited <b>Probing the Atomic-Scale Mystery of C–S–H Using Advanced Synchrotron Techniques at NanoTerasu</b> Shintarō Miyamoto <i>Tohoku University</i>
10:40 – 11:00	<b>Coffee Break</b>
	Chair : Masako Suzuki
11:00 – 11:30	Domestic Invited <b>Detecting the electronic state of Heusler alloys by RIXS-MCD in NanoTerasu</b> Rie Umetsu <i>Tohoku University</i>
11:30 – 12:00	Domestic Invited <b>Observation of Spin-Torque Diode Effect in a Kagome Antiferromagnet: Insights from X-ray Dichroism</b> Shoya Sakamoto <i>Tohoku University</i>
12:00 – 12:30	Domestic Invited <b>Magnetic topological insulators at high spatial resolution</b> Seigo Soma

*Tohoku University*

12:30 – 12:40

**Closing**