IEEE CSC
Council on Superconductivity

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YNU

IEEE Symposium on Superconducting Electronics and Materials

MARCH 10-11, 2026
YOKOHAMA NATIONAL UNIVERSITY

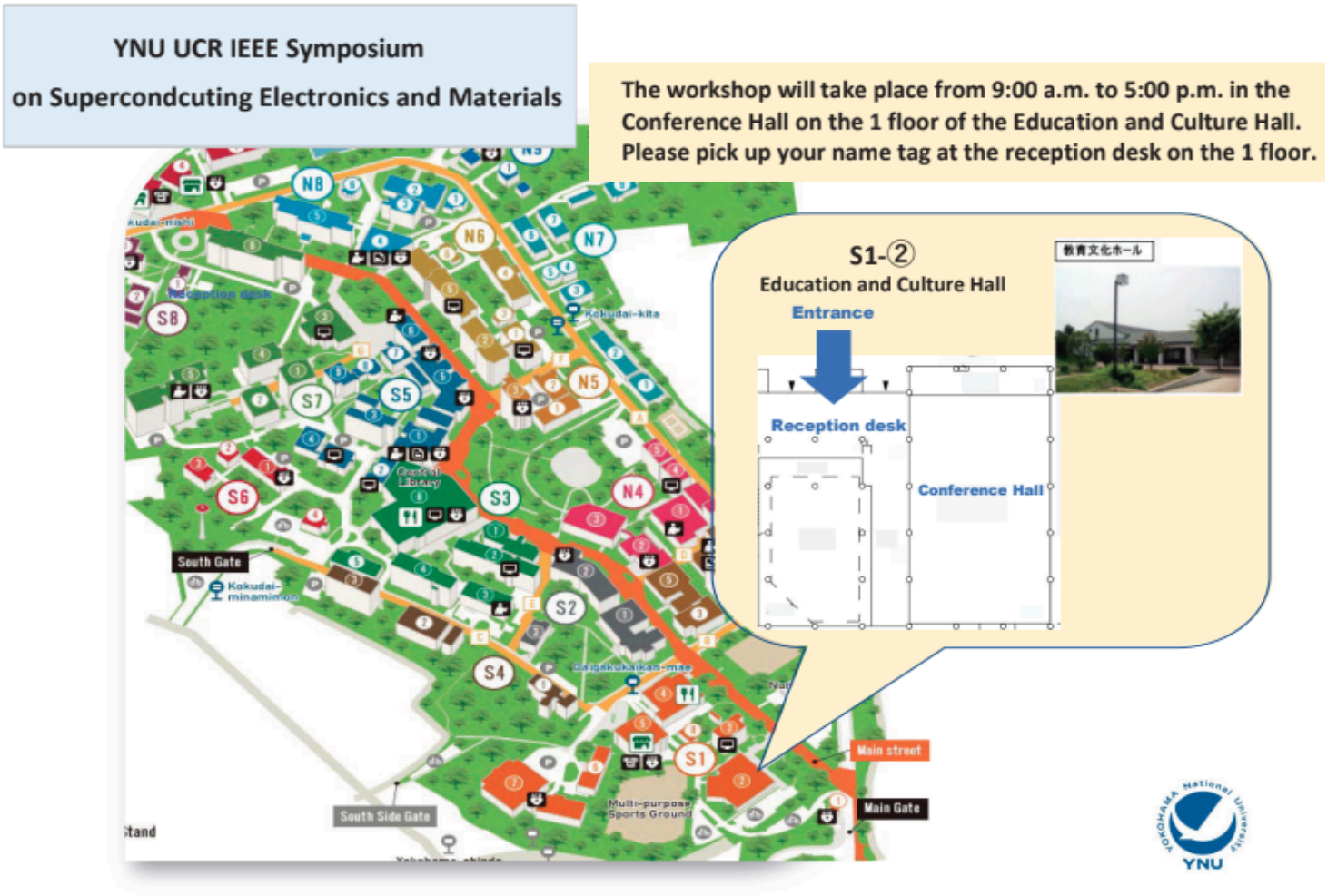
WORKSHOP DETAILS

he IEEE Symposium on Superconducting Electronics and Materials brings together leading researchers and innovators from around the world to explore the latest advances in superconductivity science and technology. This interdisciplinary gathering highlights breakthroughs in superconducting electronic systems, materials synthesis and characterization, and their applications in high-frequency devices, quantum technologies, and next-generation computing architectures. Through keynote and invited talks by distinguished experts, alongside presentations from emerging researchers, the symposium fosters dialogue on both fundamental phenomena and engineering challenges in superconducting materials and devices. Attendees will gain insight into cutting-edge research—from high-temperature superconducting thin films to quantum condensates and cryogenic electronic components—driving progress toward transformative electronic and quantum systems.

Dates and Time: March 10-11, 2026, 9:00 – 17:00 (JST)

Venue: Yokohama National University, Yokohama, Japan

WORKSHOP LOCATION



Venue:
March 10 (Tuesday)
Education and Culture Hall, Yokohama National University, Yokohama, Japan

Education and Culture Hall is indicated as S1-2 on the campus map:
https://www.ynu.ac.jp/english/about/access/map/

March 11 (Wednesday)
Seminar room 1, Electrical and Computer Engineering Bldg., Yokohama National University, Yokohama, Japan

Electrical and Computer Engineering Bldg. is indicated as N6-2 on the campus map:
https://www.ynu.ac.jp/english/about/access/map/

AGENDA - MARCH 10

SESSION DETAILS
CHECK-IN **08:30 - 09:00**
OPENING REMARKS **09:00 - 09:15** **Nobuyuki Yoshikawa,** Yokohama National University, JP
Superconductivity of Fe Chalcogenide Thin Films Prepared by PLD: High-Frequency Properties **09:15 - 10:00** **Atsutaka Maeda,** University of Tokyo, JP
Unconventional proximity effect and spin-transport at an oxide superconductor/ferromagnet interface **10:00 - 10:20** **Sachio Komori,** Nagoya, JP
Direct-Write Superconducting Circuit Elements Using a Silicon Focused Ion Beam **10:20 - 10:40** **Shane Cybart,** University of California Riverside, US
Demonstration of Logic Gate Operations in Half Flux Quantum Circuits **10:40 - 11:00** **Akira Fujimaki,** Nagoya University, AIST, National Astronomical Observatory of Japan (NAOJ), JP
Superconductor and ferromagnet materials for Josephson π junctions **11:00 - 11:20** **Feng Li,** Nagoya University, JP

AGENDA - MARCH 10

SESSION DETAILS	
Qufab Foundry for Superconducting Integrated Devices **11:20 - 11:40** **Mutsuo Hidaka,** National Institute of Advanced Industrial Science and Technology (AIST), JP	
11:40 - 13:00	**LUNCH**
Fundamentals and practical applications of superconducting high-frequency devices **13:00 - 13:45** **Shigetoshi Ohshima,** Yamagata University, JP	
Helium Focused Ion Beam Lithography for Superconducting Electronics **13:45 - 14:05** **Jay LeFebvre,** University of California Riverside, US	
Scanning SQUID Microscopy for Local Diagnostics of Superconducting Films and Devices **14:05 - 14:25** **Saburo Tanaka,** Toyohashi University of Technology, JP	
Scanning SQUID Microscopy for Local Diagnostics of Superconducting Films and Devices **14:25 - 14:45** **Yusuke Iguchi,** Stanford University, US	
14:45 - 15:10	**COFFEE BREAK**

AGENDA - MARCH 10

SESSION DETAILS	
Stochastic Computing Based on Superconducting Random Number Generators and SFQ Digital Circuits **15:10 - 15:30** **Yuki Yamanashi,** Yokohama National University, JP	
Recent Advances in AQFP-Based Integrated Circuits and Systems **15:30 - 15:50** **Naoki Takeuchi,** Kobe University, JP	
Workload-Driven Co-Design of AQFP Superconducting Electronics for Energy-Efficient AI Inference **15:50 - 16:10** **Olivia Chen,** Kyushu University, JP	
Transmon Qubits Based on NbN/AlN/NbN Epitaxial Junctions **16:10 - 16:30** **Hirotaka Terai,** National Institute of Information and Communications Technology (NICT), JP	
High-coherence NbN-based novel superconducting qubits **16:30 - 16:50** **Taro Yamashita,** Tohoku University, JP	
CLOSING REMARKS **16:50 - 17:00** **Shane Cybart,** University of California Riverside, US	
18:00	**Banquet**