

1st Workshop on the Chicago-Tohoku Quantum Alliance

Thursday, October 5 - Friday, October 6, 2023
Aoba Science Hall, Graduate School of Science, Tohoku University

Speakers

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President,
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Tomoki Ozawa

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Advanced Institute for Materials Research,
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Masaki Takata

International Center for Synchrotron Radiation
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Kentaro Totsu

Micro System Integration Center,
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Taro Yamashita

Graduate School of Engineering,
Tohoku University

Shuolong Yang

Pritzker School of Molecular Engineering,
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Poster Session

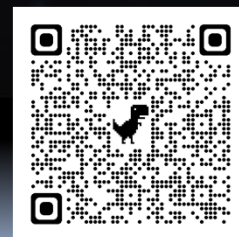
Poster session will be held on October 5 at 18:00-19:00

Registration: The workshop is free of charge, but registration is required.

Please register via the link below or the QR code.

<https://forms.gle/BrqSzTf3XPNS5Zku9>

Sponsor: National Institutes for Quantum Science and Technology (QST)



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Global Engagement Coordination Team, Tohoku University

1st Workshop on the Chicago-Tohoku Quantum Alliance

Aoba Science Hall (Science Complex C (H04) 2nd floor), Graduate School of Science, Tohoku University

October 5th, 2023 (* marks events for *invited guests only*. Thank you for your cooperation.)

Opening		
9:00-9:10	Prof. H. Ohno	
Plenary		
9:10-9:50	Prof. D. Awschalom	Opportunities for Collaboration: Quantum Engineering with Semiconductors and Molecules
Molecule quantum physics		
10:00-10:30	Prof. G. Galli	Quantum simulations for quantum technologies
10:30-10:45	Prof. T. Komeda	Single-molecule magnet combined with superconductor and RF wave for quantum process
Solid-state quantum theory & transport		
11:00-11:15	Prof. T. Koretsune	Ab-initio effective Hamiltonian approach and its applications for material design
11:15-11:30	Prof. T. Ozawa	Quantum engineering of topological phases with atoms and photons
11:30-11:45	Prof. M. Kohda	Helical spin states in semiconductor quantum structures
11:45-13:00	Lunch Session in the Multipurpose Room, Graduate School of Science	
Superconductor & mechanical quantum systems		
13:00-13:30	Prof. A. Cleland	Recent progress in quantum acoustics
13:30-13:45	Prof. T. Yamashita	Scalable superconducting flux qubits
13:45-14:00	Prof. J. Lustikova	Spin injection into high temperature superconductors
14:00-14:15	Prof. K. Totsu	Open access fabrication facility for MEMS and other nano/micro devices
Quantum spin defect & atomic impurity		
14:25-14:55	Prof. S. Guha	Heterogeneous integration of materials for quantum application
14:55-15:25	Prof. J. Heremans	Designing optically addressable spin defects in the solid-state
15:25-15:40	Prof. S. Kanai	Solid-state spin defect with oxides
15:40-15:55	Prof. H. Morishita	Electrical detection of NV spins in diamond
Atomic layer quantum systems & ARPES		
16:10-16:40	Prof. S. Yang	Quantum stethoscope for layered topological materials
16:40-16:55	Prof. T. Sato	Micro-ARPES study of exotic 2D materials
Various computing		
17:05-17:20	Prof. H. Kobayashi	QA-HPC Hybrid-computing for simulation & data-analysis hybrid applications
17:20-17:35	Prof. S. Fukami	Stochastic magnetic tunnel junction for probabilistic computing
17:35-17:50	Prof. J. Åkerman	Spin wave based time-multiplexed Ising machines
18:00-19:00	Poster session in the Multipurpose Room, Graduate School of Science	
	* Meeting of invited guests in the Seminar Room, Graduate School of Science	
19:30-21:00	* Reception at Westin Sendai (*For invited guests only.)	

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9:00-9:30	Prof. T. Endoh	* Lab Tour: CIES (Center for Innovative Integrated Electronic Systems)
Art, science, and NanoTerasu		
9:45-10:15	Prof. N. Kawalek	Cultivating Public Interest in Quantum Science through the Arts
10:15-10:40	Prof. M. Takata	The NanoTerasu doctrine -Building a new range of innovation ecosystem-
11:00-11:40	* Lab Tour: Synchrotron radiation facility: NanoTerasu	
12:00-13:20	Lunch time at Aobayama Campus	
14:00-14:40	* Lab Tour: μ SIC (Micro System Integrated Center)	
15:10-15:50	* Lab Tour: AIMR (The Advanced Institute for Materials Research)	