

Program

May 25 - 26, 2026

The First RIKEN Quantum International Workshop on Frontiers of Quantum Computing Applications and Quantum-HPC Integration

2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room

Mon, May 25

9:20 AM

Registration

Break | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room

9:50 AM

9:50 AM

Opening Remarks

Contribution | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room |

Speaker: Seiji Yunoki (RIKEN)

10:00 AM

10:00 AM

Session 1

Session | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room | **Convener:**

Seiji Yunoki (RIKEN)

10:00 - 10:40 AM

JHPC Quantum Platform for Quantum-HPC Hybrid Computing

Speaker

Mitsuhsisa Sato (RIKEN)

10:40 - 11:20 AM

Hybrid Quantum Classical Approach Exploiting Industrial Quantum Advantage with JHPC-Quantum Platform

Speaker

June-Koo Kevin Rhee (Qunova Computing)

11:20 - 11:40 AM

Large-Scale Selected-Basis Diagonalization for Quantum-HPC Hybrid Algorithms

Speaker

Tomonori Shirakawa (RIKEN)

11:40 AM

11:40 AM

Lunch

Break

1:10 PM

1:10 PM

Special Session: Quantum Computing in Chemistry and Life Sciences

Session | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room | **Convener:**

Yuji Sugita (RIKEN)

1:10 - 1:50 PM

Applications of Quantum Computing in Chemistry

Speaker

Kenneth Merz (Cleveland Clinic)

1:50 - 2:30 PM

From Quantum Algorithms to Better Therapies: Algorithmiq's Impact in Healthcare and and Life Sciences

Speaker

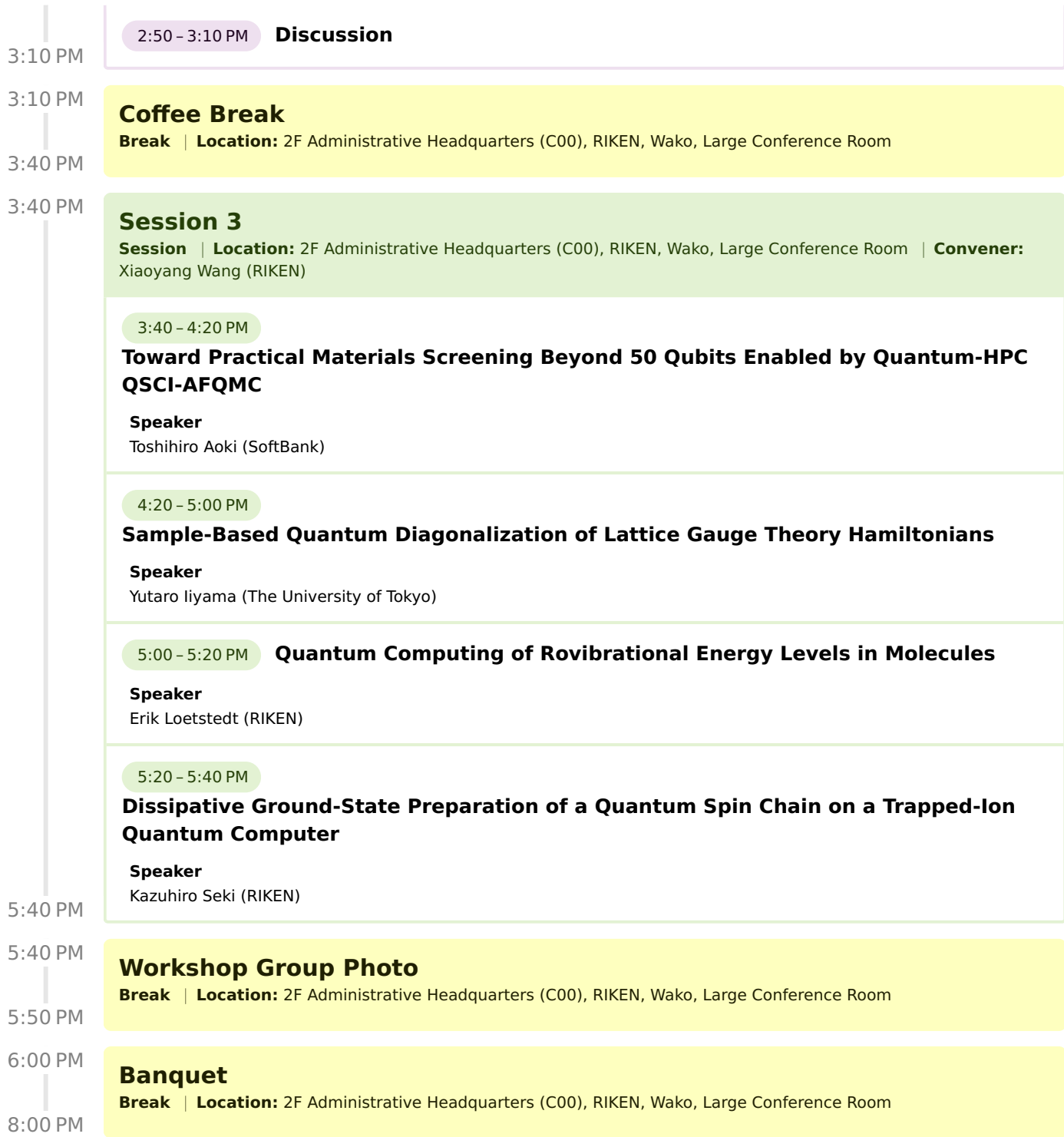
Stefan Knecht (Algorithmiq)

2:30 - 2:50 PM

Quantum for Biomedicine: Computing, Sensing, and Communication

Speaker

Hideaki Kawaguchi (The University of Tokyo)



Tue, May 26

8:50 AM

Registration

Break | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room

9:20 AM

9:20 AM

Session 4

Session | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room | **Convener:** Qibin Zhao (RIKEN)

9:20 - 10:00 AM

AI for Quantum Computing: Algorithms and Workflow

Speaker

Ikko Hamamura (NVIDIA)

10:00 - 10:40 AM

Harnessing the Generative Quantum Eigensolver for Next-Generation Materials Design

Speaker

Qi Gao (Mitsubishi Chemical)

10:40 - 11:00 AM

Quantum-Aware Fine-Tuning of Chemical Foundation Models via Bit-Bit Encoding

Speaker

Shunji Matsuura (RIKEN)

11:00 - 11:40 AM

Simulating a Real Quantum Magnet with 256 Analog Qubits

Speaker

Alexandre Dauphin (Pasqal)

11:40 AM

11:40 AM

Lunch

Break

1:10 PM

1:10 PM

Session 5

Session | **Location:** 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room | **Convener:** Shunji Matsuura (RIKEN)

1:10 - 1:50 PM

Quantum-HPC Hybrid Computation of Bimolecular Excited-State Energies

Speaker

Kentaro Yamamoto (Quantinuum)

1:50 - 2:30 PM

Toward Quantum Utility in Quantum Chemistry: Application-Centered Strategies for the 25-100 Logical Qubit Regime

Speaker

Bo Peng (PNNL)

2:30 - 3:10 PM

Experimental and Numerical Progress in FTQC Algorithms for Chemistry and Fluid Mechanics

3:10 PM	<p>Speaker Yu-ichiro Matsushita (Quemix)</p>
3:10 PM	<p>Coffee Break Break Location: 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room</p>
3:40 PM	<p>Session 6 Session Location: 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room Convener: Tetsuo Hatsuda (RIKEN)</p>
3:40 PM	<p>3:40 – 4:20 PM Large Scale Quantum Simulation with Hybrid QC-HPC Systems Speaker Artur Garcia-Saez (Barcelona Supercomputing Center)</p>
	<p>4:20 – 4:40 PM Scalable Simulation of Quantum Many-Body Dynamics with OR-Represented Quantum Algebra Speaker Lukas Broers (RIKEN)</p>
	<p>4:40 – 5:00 PM Phase Transitions in Parametrized Quantum Circuits Speaker Xiaoyang Wang (RIKEN)</p>
	<p>5:00 – 5:20 PM State-Vector Simulation of Quantum Computer on Supercomputers Speaker Naoki Yoshioka (RIKEN)</p>
	<p>5:20 – 5:40 PM Noise-Stabilized Discrete Time Crystals on Digital Quantum Processors Speaker Kazuya Shinjo (RIKEN)</p>
5:40 PM	
5:40 PM	<p>Closing Remarks Contribution Location: 2F Administrative Headquarters (C00), RIKEN, Wako, Large Conference Room Speaker: Tetsuo Hatsuda (RIKEN)</p>
5:50 PM	