

WE-Heraeus Symposium

**Japanese-German Symposium on
Applications of Quantum
Computers**

11 November 2024

**at the
Berlin Brandenburgische Akademie der
Wissenschaften (BBAW), Berlin**

**WILHELM UND ELSE
HERAEUS-STIFTUNG**



Program Monday 11 November 2024

08:00 – 09:00	REGISTRATION	
09:00 – 09:15	Oliver Benson Kohei Itoh	Welcome & Introduction
	Stefan Jorda WE-Heraeus-Stiftung	Welcome Words
09:15 – 09:45	Yasunobu Nakamura	High-fidelity control and readout of superconducting qubits
09:45 – 10:15	Hendrik Bluhm	Ingredients for spin-shuttling-based quantum processors in Si/SiGe
10:15 – 10:45	Makoto Negoro	Controller and software for superconducting quantum computer system
10:45 – 11:15	<i>Coffee Break</i>	
11:15 – 11:45	Fedor Jelezko	Spin qubits in diamond
11:45 – 12:15	Tim Schröder	Diamond spin defects as resource for photonic quantum computation
12:15 – 12:45	Robert Raußendorf	Computational Phases of Quantum Matter
12:45 – 14:00	<i>Lunch Break</i>	
14:00 – 14:30	Nayuta Takemori	New Developments in Computational Condensed Matter Physics for Quantum Computing
14:30 – 15:00	Akira Furusawa	Optical quantum computers with quantum teleportation
15:00 – 15:30	Stephanie Barz	Photonic quantum technologies: from unravelling quantum foundations to advancing quantum integration and developing applications in quantum networks and computing
15:30 – 16:15	<i>Coffee Break</i>	

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16:15 – 16.45	Kae Nemoto	Quantum Computation and machine learning
16:45 – 17:15	Naoki Yamamoto	Some extensions of phase estimation algorithm
17:15 – 17:45	Tadashi Kadowaki	Quantum CAE (computer-aided engineering) and AI for Science
17:45 – 19:00	Poster Session	
19:00	Closing	