

2025.10.10

Symposium on quantum computing and manipulation by trapped ions

Date: 2025.11.28

Place: RIKEN Wako campus, Main Research Bldg. 535-537

Program

9:00-9:10 *Opening remarks*

Prof. Kaoru Yamanouchi (The University of Tokyo)

Session I: CV

9:10-9:50 Prof. Kenji Toyoda (The University of Osaka)

“Approaches to quantum computation and simulations using phonons in trapped ions”

9:50-10:20 Dr. Takanori Nishi (The University of Tokyo)

“Surface electrode trap for continuous variable quantum computation”

10:20-11:00 Dr. Ting Rei Tan (University of Sydney)

“Controlling trapped-ion motional modes for quantum computing and quantum metrology”

11:00-11:30 Mr. Hisaya Hotaka (Hamamatsu Photonics)

“Quantitative Low-Light Imaging: From Single-Photon Counting to Photon-Number Resolving Detection”

11:30-13:00 *Lunch*

Session II. Quantum manipulation

13:00-13:40 Prof. Kiyotaka Aikawa (The University of Tokyo)

“Experiments with a levitated charged nanoparticle”

13:40-14:20 Prof. Takashi Mukaiyama (Institute of Science Tokyo)

“A trapped-ion matter-wave interferometer for rotation sensing”

14:20-15:00 Prof. Kunihiro Okada (Sophia University)

“Investigation of Ion-Molecule Reactions Using Ion Coulomb Crystals”

15:00-15:20 Mr. Ryosuke Nishimoto (The University of Osaka)

“Phase-resolved measurement of normal modes of trapped ions in a planar trap”

15:20-15:40 *Coffee break*

Session III. Qudit

15:40-16:10 Dr. Tomoya Okino (RIKEN)

“Development of qudit-based $^{40}\text{Ca}^+$ quantum computing system”

16:10-16:40 Dr. Erik Lötstedt (RIKEN)

“Quantum computing of large- S spin chain dynamics”

16:40-16:50 *Closing remarks*

17:30-19:00 *Reception*