RIKEN QUANTUM COMPUTING

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15th RQC Colloquium

Advancements in Continuous Variable Quantum Information Technology

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July 21, 2023(Fri) **09:30–10:30**(JST)

This colloquium will be held in **HYBRID** format.

On-site Venue: Wako C61 Welfare and Conference Building, 2F Large Meeting Room

Online Venue: Zoom. To receive the link, register in advance at https://krs2.riken.jp/m/rqc_registration_form

In this talk, I provide an overview of recent advancements in continuous variable (CV) quantum information technology, a domain that has seen significant progress over the past decade. The key focus of our discussion will be on CV quantum computing, where our group has achieved noteworthy success in the demonstration of large cluster states. Our exploration into this emerging field has allowed for profound understanding and manipulation of quantum states. Additionally, I will discuss the recent strides we have made in high-speed CV quantum communication and CV quantum sensing close to the Heisenberg limit. With these developments, the application and implementation of CV quantum systems have become more tangible, unlocking a new range of possibilities for quantum technology.