Quantum Machine Learning

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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

Quantum systems can generate patterns in data that classical systems cannot. Can quantum computers also recognize and classify patterns in data that classical computers cannot? This talk shows that the answer to this question is Yes. The talk provides a review of quantum machine learning methods, including quantum generative adversarial networks, quantum neural networks, and quantum algorithms for topological data analysis. We look at novel methods for quantum machine learning and identify cases where quantum computers have a provable advantage over classical machine learning methods for data analysis.