

# **Introduction to quantum optimization and its applications**

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This talk is about quantum optimization, an application of quantum computing for solving optimization problems. First, we briefly discuss some fundamental concepts in quantum computing. Then, we delve into some pivotal algorithms, especially the quantum annealing, the variational quantum eigensolver, and the quantum approximate optimization algorithm. Examples of their applications in quantum chemistry, materials science, and optimization are presented to illuminate their usage for solving real world problems.