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Presentation

QuOROM: Quantum, Operations Research and Operations Management

The Second Quantum Revolution – comprising of Quantum Computing, Quantum Communications, and Quantum Sensing – promises unprecedented abilities to improve the human condition, in a variety of ways, from improving health (through exciting applications of Quantum Machine Learning and Quantum Sensing) to improving cybersecurity (Quantum Communication). It also promises to do so using less energy than purely digital methods.

At the Tepper Quantum Group, we are exploring the twin questions: (a) what can Quantum do for operations research and operations management, and (b) what can operations research and operations management do for Quantum. In this talk, I will present an overview of our progress to date — in algorithms, hardware, and applications— and highlight a few current initiatives.