北京大学前沿计算研究中心
Center on Frontiers of Computing Studies, Peking University

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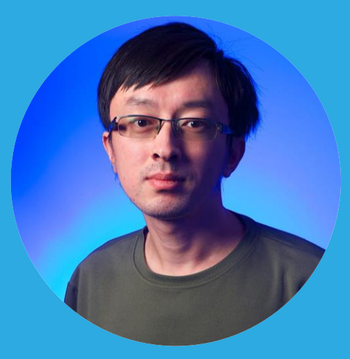
Some Applications of Pauli analysis on Quantum Algorithms and Complexity



Prof. Penghui Yao

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Host: 李彤阳 助理教授
2024年10月9日 星期三 4:00pm
静园五院204室

Abstract

Fourier analysis is playing a pivotal role in designing quantum algorithms. Recently, Fourier analysis on the space of operators and the space of super-operators, which is termed as Pauli analysis, has received increasing attention. It has found connections to various areas of quantum computing. In this talk, I will introduce some background on Pauli analysis and present some recently discovered applications in quantum learning theory and quantum complexity theory.

Biography

Penghui Yao is an associate professor in the Department of Computer Science and Technology, Nanjing University. He obtained his doctoral degree from Centre for Quantum Technology, National University of Singapore. Prior to joining Nanjing University, He was a postdoctoral researcher at CWI Netherlands; IQC University of Waterloo and QuICS University of Maryland. His research mainly focuses on quantum algorithms, quantum information theory and quantum computational complexity.

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