

NITheP Webinar

Thursday, 01 October 2020, 14h00

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Compressed Sensing Quantum State Tomography: Qubits to Qudits

Abstract: Quantum state tomography is a procedure of experimentally characterizing an unknown quantum state and it is essential in the development of quantum technologies. It is a very resource intensive task as the dimension of the system grows exponentially with its size. One can reduce the number of measurements required by restricting the class of states subject to characterization. One such attempt is Compressed Sensing Quantum State Tomography (CS-QST), which adapts the Low rank matrix recovery techniques. This approach utilizes the Pauli measurements which are only possible in power-of-two dimensional Hilbert spaces. In this talk, I will present a theoretical extension to CS-QST to Hilbert spaces whose dimension is not a power of two.

Bio: Revanth Reddy is currently an engineer at InfoWorks Data Pvt. Ltd. He recently completed his undergraduate studies at BITS-Pilani, India in 2020 and received his B. E. Computer Science degree. His research interests include Quantum Information and Quantum Computation.

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