Abstract Submitted
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Crosstalk characterization in superconducting qubits by eigenvalue estimation: Experiment[1] MATTHEW WARE, KIN CHUNG FONG, COLM A. RYAN, BRIAN HASSIK, THOMAS OHKI, MARCUS P. DA SILVA, Raytheon BBN Technologies, RAYTHEON BBN TECHNOLOGIES TEAM — Superconducting qubit devices offer a promising path towards a scalable quantum computer. As these systems continue to grow in size and complexity, crosstalk errors, which build up during long control sequences, lead to an overall loss in control fidelity. In this talk we explore the use of eigenvalue estimation (a.k.a. "spectrum estimation") in superconducting systems as a high-accuracy method to detect and quantify crosstalk between qubits, and demonstrate how these techniques allow for quick identification and estimation of system crosstalk.

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Matthew Ware
Raytheon BBN Technologies

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