Harvard Quantum Initiative

Special Seminar

Monday, October 3, 2022
Science and Engineering Complex
LL2.229

Prof. Umesh Vazirani
University of California Berkeley

"Theoretical Reflections on Quantum Supremacy"

Google's 2019 experiment and their announcement of quantum supremacy relied on the inability of classical computers to efficiently carry out a task called random quantum circuit sampling (RCS). I will describe recent theoretical developments on the complexity of RCS. I will also describe a different line of work that provides scalable and rigorous proofs of quantumness based on an approach called the cryptographic leash, and the prospects of a concrete experimental challenge based on this approach.

Refreshments will begin at 4:00PM
Followed by
Guest Presentation will begin at 4:30 PM

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