BSC RS: Beyond-classical computation from a computer science perspective

Objectives

Abstract: Outperforming classical supercomputers in a well-defined computational task is an important milestone in the long term quest for practical quantum computing. I will argue that this milestone has been reached for the task of random quantum circuit sampling. I will review recent advances in complexity theory and classical algorithms related to this experiment. BosonSampling is another important proposal for early beyond-classical demonstrations. I will review recent BosonSampling experiments and algorithms.

Short Bio:

Sergio Boixo leads the Quantum Computer Science group at Google Quantum AI. He was previously a research professor and quantum engineer at USC, and a postdoc at Harvard and Caltech. Sergio has a doctorate in physics from UNM, a master's degree in physics from UAB, is a computer engineer from UCM, and studied mathematics and philosophy at UNED. In a past life, Sergio worked as a computer engineer at the European Central Bank and other companies.

Speakers

Speaker: Sergio Boixo, Quantum Computer Science group leader at Google Quantum AI
Host: Alba Cervera, Senior Research Engineer, Quantic - CASE, BSC

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