

# **Probing Analog Quantum Machines with Supercomputer Simulations**

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The potential of analog quantum computers to defeat traditional algorithms run on standard digital computers is still a mystery.

With no examples of genuine quantum speedups nor a no-go theorem that precludes them, one of only very few avenues of research to resolve this puzzle is to study these devices via heavy numerical simulations carried out on supercomputers.

In this talk I will present results of several studies, designed to gain insight into the capabilities as well as limitations of these perplexing devices.