

What's next after Moore's law: Quantum Computing

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Abstract: As microelectronics technology nears the end of exponential growth over time, known as Moore's law, there is a renewed interest in new computing paradigms. I will discuss recent research at UCSB on superconducting quantum bits, as well as our recent start at Google to build a useful quantum computer to solve machine learning problems. A recent experiment will be highlighted that extends the lifetime of a qubit state using quantum error correction.