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Computing with memristive devices

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The computing power of current digital hardware is hitting unavoidable physical limits. Analog hardware has reemerged as an alternative solution for specialized applications. In particular, neuromorphic computers, using combination of analog and digital elements, are becoming increasingly competitive in machine learning applications, offering high-speed, low-footprint, and low-power solutions.

Memristors are nonlinear history-dependent devices, and are key components in neuromorphic hardware. In this talk I will summarize recent developments in the field and point towards fundamental open problems in analog computing with memristors.

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