

Neuromorphic circuits

Realization of biologically inspired neural networks

Project work, BA or MA thesis

Research Questions

- How can neural networks be efficiently implemented in analog hardware?
- How do Spiking Neural Networks work and how can they be trained?
- Is it possible to model the synapses of a neural network with memristors? (Memristor = "electrical resistor with memory")

Possible Tasks

- Design and simulation of spiking neural networks
- Circuit design and simulation in LTspice or Cadence
- Measurement study and modeling of memristors

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