

Nanodevices for Bio-inspired Computing

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In this talk, I will show that, for building the neuromorphic chips of the future, we will need to emulate functionalities of synapses and neurons at the nanoscale. I will review the recent developments of memristive nano-synapses and oscillating nano-neurons, the physical mechanisms at stake, and the challenges in terms of materials. Finally, I will present the first achievements of neuromorphic computing with novel nanodevices and the fascinating perspectives of this emerging field.

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