

CORRELATED OXIDES FOR NEUROMORPHIC COMPUTING

Introduce: CLAUDIO GIANNETTI, Università Cattolica del Sacro Cuore

Interviene: JAVIER DEL VALLE, Ambizione Fellow, Department of Quantum Matter Physics, University of Geneva, Switzerland

Neuromorphic computing, which mimics the architecture and components of biological neural networks, is an emerging technology which might overcome some of the challenges that traditional computing is facing. A neuromorphic computer is composed of two basic elements: neurons and synapses.

I will show how resistive switching can be used to mimic the functionalities of these two elements, focusing on volatile switching caused by the voltage-triggered insulator to metal transition in VO_2 and V_2O_3 . I will discuss several aspects of this transition, such as the underlying mechanism, the dynamics and its spatial distribution. I will also show some of our recent efforts towards emulating neuronal behaviour using this phenomenology.

Webinar

Venerdì 23 aprile 2021, ore 11.00

[Fai clic qui per partecipare alla riunione](#)

