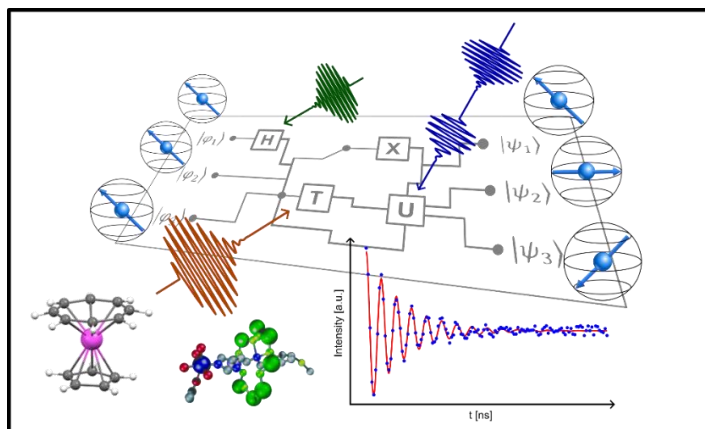


Electron spin for quantum technologies: from molecules to devices



19th May 2023 from 9,00 am to 5,00 pm
Department of Physics Aula C (Via P. Giuria 1, 10125 Torino)

The second quantum revolution entails harnessing quantum effects to develop useful tools and devices. The intrinsic magnetic moment of the electron, a property called “spin”, represents a promising platform to implement quantum technologies. The electron spin is intrinsically a two-level quantum system that can be efficiently manipulated by electromagnetic radiation. With this colloquium we wish to bring together national and international researchers that are tackling this topic from different perspectives ranging from chemistry to physics and materials science. The aim is to discuss the latest results and opportunities.

9:00 **Roberta Sessoli**, Università di Firenze, *Molecular Spin Qubits for hybrid architectures*

9:35 **Stefano Carretta**, Università di Parma, *Molecular Spin Qubits and Chiral-Induced Spin Selectivity: two promising tools for Quantum Technologies*

10:10 **Marco Fanciulli**, Università di Milano Bicocca, *Impurities in silicon for classical and quantum unconventional computing*

10:45 Coffee Break

11:30 **Marco Genovese**, INRIM, *Measuring cells parameters by colour centres in diamond*

12:05 **Alessandro Chiesa**, Università di Parma, *Building a quantum simulator with molecular spin qubits*

12:40 Lunch

14:00 **Eric McInnes**, University of Manchester, *Control and measurement of molecule...molecule interactions in supramolecular systems*

14:35 **Lorenzo Sorace**, Università di Firenze, *From single qubits to qubits and qu-gates: the manifold applications of Vanadium(IV) complexes for quantum information processing*

15:10 **Jacopo Forneris**, Università di Torino, *Mapping the electrical properties of diamond devices with native NV centers*

15:45 **Enrico Salvadori**, Università di Torino, *S=1/2 metal ions at the surface*

16:30 Coffee and refreshments

Attendance is free, but you are required to register at the link

<https://forms.gle/xhYBTupesd5KNB7HA>