

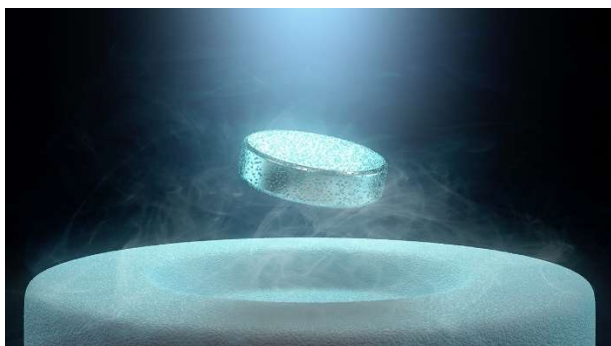
## Avviso di Seminario di Dipartimento

**Mercoledì 27 Febbraio ore 11 aula Aula Magna  
Dipartimento di Fisica e Astronomia Via Irnerio 46**

**Prof. Stephen Blundell**

**Department of Physics at the University of Oxford**

### ***EMERGENT PROPERTIES FROM COLLECTIVE QUANTUM PHENOMENA***



*In physics we try to look for simple rules and focus on the fundamental building blocks of Nature. But the Universe contains not just one particle, but many, and we are now appreciating how much new physics comes from many-particle phenomena in which a multitude of quantum objects act collectively.*

*This talk will try to explain something of the richness of emergent properties raising from collective quantum phenomena and the connections between these effects and other parts of physics, such as the way in which superconductivity and the Higgs mechanism are deeply related, and the importance of broken symmetry and topological defects.*

The Seminar will be anticipated by the Quantum Magic show held by the PhD Physicist-Mago Silvani from the University of Perugia. Some of the most fascinating physical phenomena of quantum mechanics will be shown in a continuous exchange between science and magic.



Original "magical" examples will explain some principles of quantum laws, such as tunneling, entanglement, quantum cryptography and other physical principles.