New Physics and Chemistry at Nano-Kelvin Temperatures

Cheng Chin

James Franck institute, Enrico Fermi institute, Department of Physics, University of Chicago / Alexander von Humboldt Foundation

Systems of atoms and molecules at ultralow temperatures are rapidly emerging as precise simulators of generic natural phenomena. In this talk, I will discuss how we approach the absolute zero, as well as a few inspiring cases that shed light on the emerging symmetry in few- and many-body systems, quantum information processing, as well as the evolution of early universe.