



Casimir Physics at Equilibrium: Some recent results

4 November 2024, 15:00, aula E, DiFC, Via Archirafi 36

F. Intravaia

Institut für Physik, Humboldt-Universität zu Berlin, Berlin, Germany

Abstract Casimir interactions — such as the van der Waals, Casimir and Casimir-Polder forces are rapidly becoming important for the characterization of modern experimental setups and the development of future quantum technologies. In this talk I will review some recent results in this area of research, highlighting how the interplay of material properties, thermodynamics and geometry affects these phenomena.

From Black-Body Friction to Quantum Friction

5 November 2024, 15:00, aula F, DiFC, Via Archirafi 36

F. Intravaia

Institut für Physik, Humboldt-Universität zu Berlin, Berlin, Germany

Abstract In this talk I will describe some recent results concerning the steady-state frictional dynamics of an atom moving in a complex electromagnetic environment at finite temperature. The impact of both quantum and thermal fluctuations on the atom is analyzed in detail, showing how the description contains quantum and black-body friction as special cases.

The two seminars are given in the framework of the International Cooperation project CoRI 2023 of Università degli Studi di Palermo, on the topic *Fluctuation-induced Phenomena, Casimir Interactions, Quantum Electrodynamics*.