PhD Thesis Defense

"Quantum Vacuum Energy in Cavities: from Singular Interactions to Magnetodielectrics"

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Abstract: This thesis presents an analysis of the Casimir-Lifshitz effect for configurations of two objects, being one of them contained within the other. The first part of the thesis is devoted to the construction and study of a particular family of potentials that will be used for mimicking the bodies. The aim is to employ a potential simple enough for obtaining some nontrivial analytical results.
The second part of the thesis is devoted to the proper study of the vacuum energy in cavity configurations. The main goal is to expand the analysis of the Casimir effect to this kind of configurations, establishing some general results on the sign of the energy and pressure.

11:00
February 17, 2023
Sala de Grados II, Fac. Ciencias