

Seminario de análisis matemático y aplicaciones
Analisi matematikoa eta aplikazioak mintegia

**Spectral analysis of a model describing
quantum friction.**

JÉREMY FAUPIN

**Institut Elie Cartan de Lorraine, Université de
Lorraine**

ABSTRACT: We consider a quantum Hamiltonian model describing friction. The model represents a quantum particle interacting with a homogenous medium composed of independent, quantum scalar fields. The physical system is translation invariant, so that the Hamiltonian admits a direct integral decomposition with respect to the total momentum. We study the spectrum of the family $H(p)$ of Hamiltonians at fixed total momenta p . In particular, we prove, under some infrared conditions, that $H(p)$ has a unique ground state and that the rest of the spectrum of $H(p)$ is purely absolutely continuous. This is joint work with S. De Bievre and B. Schubnel.

LUGAR / LEKUA:

Sala de seminarios de la sección de matemáticas
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