

CMM PDE Seminar

Speaker: [Léo Vivion](#), Center for Mathematical Modeling, Universidad de Chile.

Title: "[Quantum dissipative systems](#)"

Abstract: The problem of modeling dissipative effects in quantum physics dates back to the 1970s. After reviewing the main challenges associated with developing such models, I will present a specific model introduced by Bruneau and De Bièvre in the early 2000s. This model describes the interactions between a classical particle and an abstract environment, where the environment acts on the classical particle as a linear friction force. One of the key strengths of this approach is that it can be naturally extended to the quantum setting.

In the second part, I will discuss the dynamical properties of the quantum version of Bruneau and De Bièvre's model. I will also present several heuristic computations indicating that, as in the classical case, the environment acts on the quantum particle as a linear friction force. These heuristic results are supported by numerical evidence.

Venue: DIM seminar room, Beauchef 851, 5th floor.

Zoom: <https://uchile.zoom.us/j/93613339766?pwd=vB3J7Vhb0EX3kQDHfH741CKN19YKQz.1>

Friday, May 9th at 12:10 pm.

For further information, see our webpage: <https://eventos.cmm.uchile.cl/pdeseminar/>

