Speaker: **Benoît Zumer, University of Freiburg**

Title: **Revivals and quantum carpets for the relativistic Schrödinger equation**

Date: **Tuesday, December 2nd, 11:00 am (s.t.).**

Place: **Seminar room 915**

Title: **Revivals and quantum carpets for the relativistic Schrödinger equation**

In this seminar, I will investigate the wavepacket dynamics for a relativistic particle in a box evolving according to the relativistic Schrödinger (also known as the Salpeter) equation.

We derive the solutions for an infinite well, and use these solutions to construct wavepackets. We obtain expressions for the wavepacket revival times and explore the corresponding quantum carpets (the space-time probability density plots) for different dynamical regimes. We further analyze level spacing statistics as the dynamics goes from the non-relativistic regime to the ultra-relativistic limit.