



MAFIA - the seminar you can't refuse

## **Non-selfadjoint perturbations of the quantum harmonic oscillator**

**Spyridon Dimoudis**

Heriot-Watt University

25 June 2019

13:15–14:15

in T112

Fakulta jaderná a fyzikálně inženýrská, ČVUT v Praze  
Trojanova 13, 12000 Praha

**Abstract:** In this talk we will concern ourselves with perturbations of the quantum harmonic oscillator. After a brief reminder of the basic properties of this operator, conditions for a perturbation to generate a semigroup will be presented and applied to square integrable complex potentials. This result will also provide us with asymptotics for the real part of the eigenvalues of the perturbed operator. We will finish with a brief comment on the possibility of gaining more information on the eigenvalues via the Birman-Schwinger principle.