
SCHRÖDINGER OPERATORS WITH COMPLEX POTENTIALS: BEYOND THE LAPTEV-SAFRONOV CONJECTURE

Jean-Claude Cuenin

Loughborough University

December 6, 2021

I will report on recent progress concerning eigenvalues of Schrödinger operators with complex potentials. This talk can be seen as a continuation of the recent talk by Sabine Bögli (Durham) in the same seminar series, where a counterexample to the Laptev-Safronov conjecture was presented. I will explain how techniques from harmonic analysis, particularly those related to Fourier restriction theory, can be used to prove upper and lower bounds. Then I will present new results that show that in some cases one can go beyond the threshold of the counterexample.