

On a class of anharmonic oscillators

Marianna Chatzakou, Michael Ruzhansky
Ghent University (Belgium)

Julio Delgado
Universidad Del Valle (Colombia)

`marianna.chatzakou@ugent.be`

Abstract

We will discuss a class of anharmonic oscillators on $\mathbb{R}^n$ corresponding to Hamiltonians of the form $A(D) + V(x)$, where $A(\xi)$ and $V(x)$ are smooth functions satisfying some regularity conditions. Our analysis is in the framework of Weyl-Hörmander classes of operators. The relation of the latter with the Schatten-von Neumann classes of operators will be used to derive spectral properties of these operators. The talk is based on the works *Chatzakou, M, Delgado, J. and Ruzhansky, M. (2021) 'On a class of anharmonic oscillators', J. Math. Pures Appl.* and *Chatzakou, M, Delgado, J. and Ruzhansky, M. (2022) 'On a class of anharmonic oscillators: General case', Bull. Math. Sci..*