Weyl and Weyl picture of Quantum mechanics. An inverse problem for the Schrodinger operator.

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Abstract:

The goal of this talk is well pose and solve the following semi-classical inverse problem: The potential V(x) in the Schrödinger operator $-\hbar^2 \dfrac{d^2}{dx^2} + V(x)$ can be recovered, under some weak genericity assumptions, from the spectrum of modulo $o(h^3)$. This work is a simplified version of a Seismology problem studied by Colin de Verdiere, M. Campillo and all. We will discuss about that motivation and we show the main ideas of a constructive proof by the previous problem.