

SEMINAR

CAPDE de EDPs

Expositor
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PUC

Title

Semiclassical Trace Formula and Spectral Shift Function for Schrödinger Operators with Matrix-Valued Potentials.

Abstract: In this talk, I will present some recent results on the spectral properties of semiclassical systems of pseudodifferential operators. We developed a stationary approach for the study of the Spectral Shift Function for a pair of self-adjoint Schrödinger operators with matrix-valued potentials. A Weyl-type semiclassical asymptotics with sharp remainder estimate for the SSF is obtained, and under the existence condition of a scalar escape function, a full asymptotic expansion for its derivatives is proved. This last result is a generalization of the result of Robert-Tamura (1984) proved in the scalar case near non-trapping energies. Our results are consequences of semiclassical trace formula for general microhyperbolic systems possibly with eigenvalues crossings.

This talk is based on a recent work with Mouez Dimassi (University of Bordeaux, France) and Setsuro Fujiié (Ritsumeikan University, Japan).

Lunes 06 de Agosto a las 17:00 hrs, en la sala de John Von Neumann CMM, Beauchef 851, Torre Norte, Piso 7.