GLUING SEMICLASSICAL RESOLVENT ESTIMATES VIA PROPAGATION OF SINGULARITIES

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Abstract

We use semiclassical propagation of singularities to give a general method for gluing together resolvent estimates. As an application we prove estimates for the analytic continuation of the resolvent of a Schrödinger operator for certain asymptotically hyperbolic manifolds in the presence of trapping which is sufficiently mild in one of several senses. As a corollary we obtain local exponential decay for the wave propagator and local smoothing for the Schrödinger propagator. This project is joint work with Andras Vasy.