

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, OCTOBER 31, 2012

PADEL FORD C-36

3:50PM–5PM

Microlocal analysis of radial points

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Microlocal analysis relies on correspondences between quantum physics and classical physics to give information about certain PDEs—for instance, linear variable-coefficient PDEs on manifolds, interpreted as quantum systems. Foundational work of Duistermaat and Hörmander establishes this framework under assumptions in which the associated classical dynamics are well-behaved. In this talk, I present analogous results (including propagation of singularities and a normal form) in a common setting in which the corresponding classical dynamics are less well-behaved (in the presence of *radial points*). This has applications in scattering theory as well as analysis on spaces such as those which are asymptotically Minkowski, hyperbolic, and de Sitter. This work is in part joint with Andrs Vasy.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, www.math.washington.edu, follow the link **Seminars, Colloquia, and Conferences**).