

# IP/DIFFERENTIAL GEOMETRY/PDE SEMINAR

TUESDAY, DECEMBER 4, 2012

MEB 243

2:30PM–3:30PM

Resonances for normally hyperbolic trapped sets

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Resonances are complex analogs of eigenvalues for Laplacians on noncompact manifolds, arising in long time resonance expansions of linear waves. We prove a Weyl type asymptotic formula for the number of resonances in a strip, provided that the set of trapped geodesics is  $r$ -normally hyperbolic for large  $r$  and satisfies a pinching condition. Our dynamical assumptions are stable under small smooth perturbations and motivated by applications to black holes. We also establish a high frequency analog of resonance expansions.

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

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