

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, APRIL 15, 2015

PADELFORD C-36

4–5PM

The conformal method on manifolds with ends of cylindrical
type

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The conformal method has proven to be an effective approach for generating solutions to the Einstein constraint equations on manifolds which are closed or asymptotically flat. This technique has been relatively unexplored on manifolds with asymptotically cylindrical ends, despite the existence of several known families of solutions to the Einstein field equations possessing such manifolds as Cauchy hypersurfaces. After giving a brief overview of the conformal method, I will discuss a fixed point approach to solving the resulting semilinear system on manifolds with ends of cylindrical type and asymptotically constant mean curvature. Time permitting, I will also discuss the obstruction to extending this approach to manifolds with negative Yamabe invariant.

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**).

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