

# DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, MAY 10, 2017

PADELFORD C-36

4PM–5PM

Non-linear stability of Kerr-de Sitter black holes

**Peter Hintz**

(UC BERKELEY)

I will explain some ideas behind the proof of the global stability of the Kerr-de Sitter family of black holes as solutions of the initial value problem for the Einstein vacuum equations when the cosmological constant is positive. I will describe the general framework which enables us to deal systematically with the diffeomorphism invariance of Einstein's equations, and thus how our solution scheme finds a suitable gauge, within a carefully chosen finite-dimensional family of gauges, in which we can find the global solution. I will also address the issue of finding the mass and the angular momentum of the final blackhole. This talk is based on joint work with Andras Vasy.

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**).

The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at least ten days in advance at: 206-543-6450/V, 206-543-6452/TTY, 206-685-7264 (FAX), or [dso@u.washington.edu](mailto:dso@u.washington.edu).