## DIFFERENTIAL GEOMETRY/PDE SEMINAR

Wednesday, February 25, 2015 Padelford C-36 4-5PM

## Noncommutative geometry, equivariant cohomology, and conformal invariants

## **Raphael Ponge**

## (SEOUL NATIONAL UNIVERSITY AND UC BERKELEY)

We will explain how to apply the framework of noncommutative geometry in the setting of conformal geometry. We plan to describe three main results. The first result is a reformulation of the local index formula of Atiyah-Singer in conformal geometry, i.e., in the setting of the action of a group of conformal diffeomorphisms. The second result is the construction of new conformal invariants out of equivariant characteristic classes. The third result is a version in conformal geometry of the Vafa-Witten inequality for eigenvalues of Dirac operators. This is joint work with Hang Wang (University of Adelaide).

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).

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.