

# DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, OCTOBER 19, 2005

PADEL FORD C-36

3:50-5PM

New invariants for CR and contact manifolds

**Raphael Ponge**

(UC BERKELEY)

In this talk I will explain the construction of several new invariants for CR and contact manifolds as noncommutative residue traces of various geometric pseudodifferential projections. In the CR setting these operators arise from the  $\bar{\partial}_b$  complex and include the Szegő projections. In the contact setting they stem from the generalized Szegő projections at arbitrary integer levels of Epstein-Melrose and from the contact complex of Rumin. In particular, we recover and extend recent results of Hirachi and Boutet de Monvel and answer a question of Fefferman.

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).