Noncommutative geometry, equivariant cohomology, and conformal invariants

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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).

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