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Leibniz
Universität
Hannover

Oberseminar Analysis und Theoretische Physik

Prof. Dr. Raphaël Ponge

Seoul National University

Noncommutative Geometry and Conformal Geometry

This will be report on a series of joint papers with Hang Wang (U. Adelaide, Australia). The general aim of these papers is to use tools from noncommutative geometry to study conformal geometry and some noncommutative incarnations of conformal geometry. In this talk, I will present three main results related to conformal geometry. The first main result is a reformulation of the local index formula in the setting of conformal-diffeomorphism invariant geometry, i.e., in settings of action of group of diffeomorphism preserving a given conformal structure. The second main result is the construction of a new family of global conformal invariants taking into account the action of the group of conformal-diffeomorphisms. These invariants are not of the same type as the conformal invariants considered by Spyros Alexakis in his celebrated solution of the Deser-Schwimmer conjecture. The third result is a version of Vafa-Witten inequality in conformal geometry, i.e., we obtain a precise control of the Vafa-Witten bound under conformal changes of metrics.

**Dienstag, 9.12.2014, 15:00h, Raum g005
Hauptgebäude der Leibniz Universität**

Dazu laden herzlich ein:
Prof. Dr. Wolfram Bauer
Prof. Dr. Joachim Escher
Prof. Dr. Olaf Lechtenfeld
Prof. Dr. Elmar Schrohe
Prof. Dr. Christoph Walker

Weitere Informationen finden Sie auch unter
http://www.ifam.uni-hannover.de/~escher/de/os_anal.php