Leibniz Universität Hannover

Oberseminar
Analysis und Theoretische Physik

Dr. Cyril Levy

Universität Potsdam

Global pseudodifferential calculus on the noncommutative torus

This talk is based on joint work with Carolina Neira and Sylvie Paycha.
Pseudodifferential calculus has proven to be a very useful tool in many branches of analysis and geometry (partial differential equations, time-frequency analysis, geometrical invariants computation, index theory, etc). On a closed manifold, symbols are locally defined concepts. This essentially makes the symbol calculus of pseudodifferential operators difficult to extend to general noncommutative spaces (spectral triples). However, if one assumes that the manifold has some symmetry (through the action of a Lie group) then we have at our disposal a global calculus, with globally defined symbols and quantization map. This opens a door for the exploration of a global calculus of pseudodifferential operators on noncommutative spaces, such as the noncommutative torus. The aim of this talk is to present the construction of such calculus, some associated results concerning the classification and construction of traces, and some possible applications to the computation of geometrical invariants on the noncommutative torus.

Dienstag, 13.11.2012, 15:00 Uhr, Raum g005
Hauptgebäude der Leibniz Universität

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