Leibniz Universität Hannover

## Oberseminar Analysis und Theoretische Physik

# Prof. Dr. Ursula Ludwig

Universität Duisburg-Essen

# Cheeger-Müller Theorem on Singular Spaces

An important comparison theorem in global analysis is the comparison of analytic and topological torsion for smooth compact manifolds equipped with a unitary at vector bundle. It has been conjectured by Ray and Singer and has been independently proved by Cheeger and Müller in the 70ies.
In the first part of the talk I will recall the Cheeger-Müller theorem for smooth manifolds and discuss applications in arithmetic geometry and physics. Then I will comment on recent progress regarding the generalisation of the Cheeger-Müller theorem to singular spaces. In the last part of the talk, I will explain the Bismut-Zhang philosophy in the context of conical singularities.

## Dienstag, 9.7.2019, 15:00 Uhr, Raum c311 Hauptgebäude der Leibniz Universität

Dazu laden herzlich ein:

Prof. Dr. Wolfram Bauer, Prof. Dr. Joachim Escher,
Prof. Dr. Elmar Schrohe, Prof. Dr. Christoph Walker