



Leibniz  
Universität  
Hannover

**Oberseminar Analysis und Theoretische Physik**

**Dr. Nikhil Savale**

Universität zu Köln

**Spectrum and abnormals in  
sub-Riemannian geometry:  
the 4D quasi-contact case**

We prove several relations between spectrum and dynamics including wave trace expansion, sharp/improved Weyl laws, propagation of singularities and quantum ergodicity for the sub-Riemannian (sR) Laplacian in the four dimensional quasi-contact case. A key role in all results is played by the presence of abnormal geodesics and represents the first such appearance of these in sub-Riemannian spectral geometry.

**Dienstag, 07.01.2020, 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