Oberseminar
Analysis und Theoretische Physik

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The spectral geometry
of trapezoids

In forthcoming work with Z. Lu and H. Hezari, we prove that trapezoids are spectrally determined. That is, if two trapezoidal planar domains are isospectral for the Euclidean Laplacian with Dirichlet boundary condition, then they are the same, up to rigid motions of the plane. In more colloquial terms, we prove that *one can hear the shape of a trapezoidal drum!* Although this may seem a trite little fact, the proof is quite technical and involves a careful analysis of both the heat and wave traces, and in particular, a careful analysis of the singularities of the wave trace. We shall discuss both these and other methods as well as open problems related to *hearing the shape of a drum.*

Dienstag, 14.7.2015, 16:00h, 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/os_analysis.html