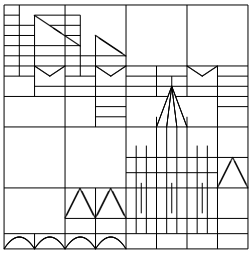
Universität Konstanz

Fachbereich
Mathematik und Statistik



Prof. Dr. Robert Denk

Prof. Dr. Reinhard Racke

Prof. Dr. Oliver Schnürer
Oliver.Schnuerer@uni-konstanz.de

Konstanz, den 11. August 2011

Im

Oberseminar Partielle Differentialgleichungen

wird am

Montag, dem 15. August 2011,

folgender Vortrag gehalten:

Dr. Julie Clutterbuck (Australian National University Canberra):
„Proof of the fundamental gap conjecture“

Zeit: 14:15 Uhr

Raum: F 424

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

Abstract of the corresponding paper: We prove the Fundamental Gap Conjecture, which states that the difference between the first two Dirichlet eigenvalues (the spectral gap) of a Schrödinger operator with convex potential and Dirichlet boundary data on a convex domain is bounded below by the spectral gap on an interval of the same diameter with zero potential. More generally, for an arbitrary smooth potential in higher dimensions, our proof gives both a sharp lower bound for the spectral gap and a sharp modulus of concavity for the logarithm of the first eigenfunction, in terms of the diameter of the domain and a modulus of convexity for the potential.
(invited by Oliver Schnürer)