Universität Konstanz

Fachbereich Mathematik und Statistik

Prof. Dr. Robert Denk

Prof. Dr. Heinrich Freistühler
heinrich.freistuehler@uni-konstanz.de

Prof. Dr. Oliver Schnürer

Universität Konstanz · Fach V 199 · D-78457 Konstanz

Datum: 20. Juli 2010

Im

Oberseminar Partielle Differentialgleichungen

wird am

Dienstag, den 27. Juli 2010,

folgender Vortrag gehalten:

Prof. Dr. Jörg Seiler (Loughborough)
„Parabolic PDE and Pseudodifferential Operators with Volterra Property"

Zeit: 14:15 Uhr

Raum: G 201

Interessenten sind herzlich willkommen!

R. Denk,   H. Freistühler,   O. Schnürer

Abstract:

This seminar is intended to give an elementary introduction to the use of pseudodifferential operators in the analysis of parabolic partial differential equations. It is addressed to students and interested laymen, not to specialists in the field. As a starting point, elliptic theory of pseudodifferential operators on $\mathbb{R}^n$ is recalled. The typical feature is that elliptic operators can be 'nearly' inverted, i.e., up to smoothing remainders. A 'nearly inverse' of an elliptic operator is called a parametrix. Then it will be discussed how the same formalism of constructing a parametrix to elliptic operators together with an additional property of the pseudodifferential symbols (the Volterra property) yields the existence of an exact inverse to parabolic operators.