

Im

Oberseminar Analysis

hält

Prof. Dr. Moritz Egert

TU Darmstadt, Fachbereich Mathematik

einen Vortrag zum Thema

Kato square root problem – a personal review

Abstract:

Let L be a second-order elliptic operator in divergence form with bounded and measurable coefficients and let a be the corresponding sesquilinear form. The question that became famous as the 'Kato square root problem' is whether (or not) the domain of the maximal accretive square root of L coincides with $D(a)$. For differential operators in \mathbb{R}^n , this problem had remained unsolved between 1961 and 2001. A remarkable elaboration of the original proof was presented by Axelsson-Keith-McIntosh in 2006. I will try to give an overview of their proof, highlighting the use of functional calculus for Dirac operators, harmonic analysis and potential theory. I will end with a discussion of recent results on the problem for operators with Dirichlet boundary conditions on open subsets, joint with S. Bechtel and R. Haller-Dintelmann.

Datum: **Donnerstag, 2. Dezember 2021**

Zeit: **15:15 Uhr**

Der Vortrag findet über das Videokonferenzsystem „Zoom“ statt.

Ansprechpartner: Prof. Dr. Ralph Chill

Der virtuelle Raum ist über folgenden Link erreichbar:

<https://tu-dresden.zoom.us/j/89887698744?pwd=TVR3djhXNkV2U1ZFMTJ3czBOd3c4dz09>

Meeting ID: 898 8769 8744 , Passcode: @8%qq2

Alle Interessenten sind herzlich eingeladen.