
Einladung zu einem Vortrag
im Rahmen des DK-Seminars des Karl Popper Kollegs von

Prof. Dr. William Rundell
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zum Thema
Inverse problems for anomalous diffusion models

Ort: I.2.01 der Universität Klagenfurt
Zeit: Mittwoch, 25. April 2018, um 11 Uhr c.t.

Kurzfassung:

It is a little over a hundred years ago when the principles of classical diffusion were placed on a formal footing.

From a partial differential equation perspective the central player in the process was the heat or, more generally, a parabolic equation.

However, over the last fifty years a host of applications have arisen where it is clear that such a diffusion process gives a very poor fit to observations.

From this, several anomalous, that is non-classical, models have been proposed.

This talk will look at a few such cases and the resulting generating differential equations. This will take us into the realm of fractional calculus and non-local operators.

A direct problem is when one knows the model and its components and wish to find the solution; the inverse problem is when one has values of a solution as data and from this hope to recover either the model or some of its constituent parts.

The central theme of this talk will be investigating differences, in uniqueness, stability and reconstruction for certain standard inverse problem questions using both classical and anomalous diffusion.

Das Institut für Mathematik freut sich auf Ihren Besuch.

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