Gastvortrag

Donnerstag, 16. Mai 2024
Uhrzeit: 13:00 Uhr
Seminarraum I

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Pointwise estimates for parabolic nonlocal equations

Abstract:

The celebrated De Giorgi-Nash-Moser theory establishes Hölder regularity of solutions to second order equations in divergence form without any regularity assumptions on the coefficients. This result was a key ingredient in the resolution of Hilbert's XIXth problem in the 1950s. An important contribution to the theory was made by Moser who established a Harnack inequality for solutions to such equations.

During the last 20 years, there was a huge interest in the study of similar regularity results for solutions to nonlocal equations governed by operators that are modeled upon the fractional Laplacian. In this talk, we give an overview of this direction of research, focusing on the main difficulties arising from the long range interactions, that lie in the nature of nonlocal models. Moreover, we explain our recent results on the nonlocal parabolic Harnack inequality and Hölder regularity estimates, which complete the regularity program for linear nonlocal equations with bounded measurable coefficients.

This talk is based on a joint work with Moritz Kaßmann

Eingeladen von Naian Liao