

EINLADUNG

ZUM MATHEMATISCHEN KOLLOQUIUM

Es spricht

Herr Prof. Dr. Björn Ruffer

(Lehrstuhl Angewandte Mathematik, Bauhaus-Universität Weimar)

Zum Thema:

„Lyapunov functions for the Douglas-Rachford method“

Abstract:

The Douglas-Rachford method was conceived as a matrix splitting method to solve partial differential equations numerically, but has since proven itself to be a robust go-to method to solve very generic non-convex optimisation problems, including feasibility problems. In the convex case it is well known that the method converges weakly if the problem has a solution, and even if it does not, the method provides insights into how far away from a solution the problem is. The elusive non-convex case has seen several problem-specific convergence proofs based on Lyapunov's direct method, which have subsequently inspired approaches to accelerate the algorithm. This talk will provide an introduction to the Douglas-Rachford algorithm and the problems it can solve, as well as attempt to give an overview of some of the Lyapunov function constructions and the benefits the Lyapunov perspective provides.

Dienstag, 21. Juni 2022, 15:00 Uhr, F 3001 im Faradaybau

Alle Interessierten sind herzlich eingeladen!

Ilmenau, 20.06.2022

Das Institut für Mathematik