

MATHEMATISCHES INSTITUT DER UNIVERSITÄT BAYREUTH

DER GESCHÄFTSFÜHRENDE VORSTAND

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16. Dezember 2022

Einladung

zum

Mathematischen Kolloquium

Am Donnerstag, dem 19. Januar 2023, spricht

Herr Prof. Dr. Gustav Holzegel,
Mathematisches Institut
Universität Münster
Gast am Lehrstuhl für Nichtlineare Analysis
und Mathematische Physik
bei Herrn Prof. Dr. Gerhard Rein

über das Thema

The Stability of Black Holes in General Relativity

Abstract

Black Holes feature among the most fascinating predictions of Einstein's theory of general relativity. In the past decades fundamental progress has been made both at the experimental level and at the level of their mathematical understanding, which is the topic of my talk.

I will begin by connecting general relativity to the analysis of non-linear partial differential equations and describe the geometry of the most important black hole solutions. In the main part of the talk I will introduce the stability problem for black holes and focus on recent work with Dafermos, Rodnianski and Taylor establishing the non-linear stability of the Schwarzschild family of black holes. Emphasis will be put on explaining the interplay between geometry and analysis.

Beginn: 16.30 Uhr (Kaffee/Tee ab 16.00 Uhr im Seminarraum 748)

Ort: Hörsaal H 19, Gebäude Naturwissenschaften II, Universitätsgelände

gez. J. Rambau