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E I N L A D U N G

(as part of the Joint General Relativity and Geometric Analysis Seminar)

zum Vortrag

von

Thomas Körber

(Albert-Ludwigs-Universität Freiburg)

über

„The Riemannian Penrose inequality for asymptotically flat manifolds with a non-compact boundary“

Abstract:

The Riemannian Penrose inequality is a fundamental result in mathematical general relativity and provides an estimate for the area of an outermost minimal surface in an asymptotically flat three-manifold solely in terms of the global mass. It was originally proven by Huisken and Illmanen using a weak version of the inverse mean curvature flow which has the crucial property of evolving the so-called Hawking mass in a non-decreasing way. In this talk, I will present a recent result which shows that a suitable version of the Penrose inequality continues to hold if the ambient manifold has a non-compact boundary. The main ingredient in the proof is a free boundary version of the weak inverse mean curvature flow which is obtained as the limit of a new approximation scheme accommodating for the presence of the non-compact boundary.

Zeit: Freitag, 29.11.2019, **11.00**

Ort: Fakultät für Mathematik, Oskar-Morgenstern-Platz 1, 1090 Wien,
Besprechungszimmer, 9. Stock

gez.: P. T. Chrusciel, M. Eichmair