



EINLADUNG

Literaturseminar

zum Vortrag

von

Walter Simon

(Vienna)

über

„Marginally trapped surfaces“

Abstract:

A marginally trapped surface (MTS) is a compact two-surface in spacetime such that (at least) one of the two families of orthogonally emanating null geodesics has vanishing expansion. Compared to related concepts like trapped surface, apparent horizon, etc., a MTS is the least restrictive key ingredient in results on black hole formation and -merger, as well as for singularity formation in General Relativity. The mathematical analysis of MTSs involves differential geometry, bifurcation analysis, and elliptic theory applied to quasilinear equations, in particular Jang's equation. We give simple examples of spacetimes with and without MTS, quote mathematical results, prove a few simple ones, expose their role in black hole physics mentioned above, and compare with recent numerical simulations.

Zeit: Donnerstag, 16.01.2020, **14.00**

Ort: Arbeitsgruppe Gravitation, Währinger Straße 17,
Seminarraum 218, 2. Stock

gez.: P. T. Chruściel, D. Fajman