



Wintersemester 2017/18

Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den 09.11.2017 spricht um 14 Uhr c. t. im Raum S9

Axel Fehrenbach

über das Thema

Asymptotically hyperboloidal graphical time-slices in the Schwarzschild space-time

In this talk we will derive some specific examples of hypersurfaces in the Schwarzschild space-time which have an important role as examples in the the current research about the center of mass in general relativity.

These examples, so called “graphical time-slices”, arise as graphs of smooth functions “over” the canonical time-slice in the Schwarzschild space-time.

After discussing the “general” case we will introduce the concept of asymptotical hyperbolicity and then consider the special case of (rotational symmetric, umbilic,) asymptotically hyperboloidal graphical time-slices.

Using these assumptions, the basic properties of graphical time-slices (and some thoughts about the Schwarzschild-anti-de Sitter space-time) we will derive and solve two ordinary differential equations for the function which defines these special graphical time-slices.

Hierzu wird herzlich eingeladen.

C. Cederbaum, G. Huisken