



EINLADUNG

im Rahmen des Literaturseminars

zum Vortrag

von

Gernot Heißel

(Vienna)

über

„From analytical to numerical relativity“

Abstract:

I am going to present the research I have done for my Master's and my PhD theses.

For the former, at the University of Vienna, I worked with Mark Heinzle on spatially homogenous cosmology and dynamical systems. We determined the past and future asymptotic dynamics of a particular class of models, locally rotationally symmetric Bianchi type VIII with an anisotropic fluid, and investigated the question if anisotropic matter matters. It does!

For the latter, at Cardiff University and in the LIGO Scientific Collaboration, I worked with Mark Hannam on initial data for black hole simulations. I will explain what trumpet initial data is and why it is of interest, in particular with regards to binary black hole simulations for gravitational wave extraction, and how this ties in with the LSC's task of detecting gravitational waves in the broader context. I will present our numerical approach to derive trumpet initial data for Schwarzschild and extreme Kerr black holes, and argue that it should be generalisable to slow Kerr as well.

Zeit: Donnerstag, 14.6.2018, **14.00**

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

gez.: P. Chrusciel, D. Fajman