



EINLADUNG

im Rahmen des Literaturseminars

zum Vortrag

von

Zoe Wyatt

(Edinburgh)

über

„The Weak Null Condition and Kaluza Klein Spacetimes“

Abstract:

In string theory, our most developed theory of quantum gravity to date, one is interested in spacetimes of the form $R^{(1+3)} \times K$ where K is some n -dimensional compact Ricci-flat manifold. In the first and simplest case considered by Kaluza and later Klein, K is the n -torus with the flat metric. An interesting question to ask is whether this solution to the Einstein equations, viewed as an initial value problem, is stable to small perturbations of the initial data. Motivated by this problem, I will outline the proof of stability in a restricted class of perturbations, and discuss the physical justification behind this restriction. Furthermore the resulting PDE system exhibits the weak-null condition, and I will discuss how it can be treated by generalising the proof of the non-linear stability of Minkowski spacetime given by Lindblad and Rodnianski.

Zeit: Donnerstag, 15.3.2018, **14.00**

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

gez.: P. Chrusciel