



## SFB-Seminar "Konforme Wellengleichungen" (Teilprojekt C7)

### ZEIT:

14.10.2014, 15:00 Uhr - 18:00 Uhr

### ORT:

Big Lecture Hall  
AEI-Hauptgebäude  
Am Mühlberg 1  
14476 Golm

### PROGRAMM:

15:00 - 15:30 Kaffee-Pause

15:30 - 16:30 **Dr. Gustav Holzegel (Imperial College London)**

#### **The Black Hole Stability Problem**

A fundamental open problem in general relativity is to establish the non-linear stability of the Kerr-family of black holes. After discussing the definitive decay results obtained in the context of the free scalar wave equation on Kerr-spacetimes (and the mechanisms that underly them) I will outline our recent proof of the linear stability of the Schwarzschild solution under gravitational perturbations. The latter is joint work with Dafermos and Rodnianski.

16:30 - 17:00 Kaffee-Pause

17:00 - 18:00 **Prof. Dr. Piotr Bizon (Uniwersytet Jagiellonski Krakau)**

#### **Blowup for nonlinear wave equations**

One of the most interesting features of many nonlinear evolution equations is the spontaneous onset of singularities ("blowup") in solutions starting from smooth initial data. The talk is intended as an elementary introduction to the problem of blowup for semilinear wave

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equations. Prof. Bizon will focus on general ideas and illustrate them with examples, without going into technical details.

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