Sommersemester 2020

**Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie**

Am Donnerstag, den **16.07.2020** spricht um **14 Uhr c. t.** per Videoübertragung

Dr. Anne Franzen
(Technical University of Lisbon)

über das Thema

Strong cosmic censorship black hole interior stability analyses on the level of scalar waves

Motivated by the Strong Cosmic Censorship Conjecture, in the presence of a cosmological constant, we consider solutions of the scalar wave equation $\Box_g \psi = 0$ on fixed subextremal Reissner–Nordström–de Sitter backgrounds (M, g), without imposing symmetry assumptions on ϕ. We provide a necessary condition, in terms of surface gravities and a parameter for an exponential decaying Price law, for a local energy of the waves to remain bounded up to the Cauchy horizon. The energy we consider controls, in particular, regular transverse derivatives at the Cauchy horizon, which allows us to extend the solutions (as functions), to the Cauchy horizon, in $C^0 \cap H^1_{loc}$. This corresponds to another manifestation of the potential breakdown of Strong Cosmic Censorship in the positive cosmological constant setting.

Hierzu wird herzlich eingeladen. Bei Interesse bitte per E-Mail an angelika.spoerer-schmidle@uni-tuebingen.de anmelden, um den Link zur Videoübertragung zu erhalten.

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