



Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **23.11.2023** spricht um **14 Uhr s.t.** im Hörsaal **2.22 (Haus 9, Potsdam)**, per **Zoomübertragung in N15 (Tübingen) und über Zoom**

Dr. Daniel Pook-Kolb
(Max Planck Institute for Gravitational Physics)

über das Thema

Black hole horizons in a binary black hole merger

Apparent horizons are routinely used in numerical relativity to describe black holes in simulations of dynamical systems. Advances in numerical methods allowed us to follow these objects into the interior of merging black holes, revealing how the two original horizons connect with the remnant horizon. In this talk, I will present results on head-on mergers, showing that the evolution of apparent horizons is much more intricate than previously thought: In the interior of the newly formed common horizon, the original horizons are individually annihilated by unstable horizon-like structures. An important role for understanding this behaviour is played by the MOTS stability operator. This completes our picture of how two black holes become one and provides the analogue of the famous pair-of-pants diagram of the event horizon now for the apparent horizon.

Den Zoom-Link erhalten Sie per E-Mail von Frau Martina Neu.

For participating online, please sign up by sending an email to Martina Neu.

Hierzu wird herzlich eingeladen.

Carla Cederbaum, Gerhard Huisken, zusammen mit Jan Metzger (Potsdam)