



**Oberseminar**  
**Geometrische Analysis, Differentialgeometrie und Relativitätstheorie**

Am Donnerstag, den **20.04.2023** spricht um **14:15 Uhr** im Raum **S9 (C06H05)** und über Zoom

**Anna Sancassani**  
(Tübingen)

über das Thema

## **Corresponding CMC initial data sets and their KIDs**

A result by Choquet-Bruhat and Gerocha allows us to study the Einstein Equation as a Cauchy problem, describing the evolution of suitably defined initial data. As observed by Chruściel and Tod, there exists a simple algebraic transformation mapping initial data with constant mean curvature (CMC) and  $\Lambda < 0$  to CMC initial data with  $\Lambda = 0$ . This correspondence in particular links the hyperbolic slice in Anti-de Sitter (AdS) to the hyperboloidal slice in Minkowski, and it has been used to heuristically transfer knowledge between asymptotically flat and asymptotically AdS Spacetimes. In this talk, I will present results on the effect of this correspondence on the symmetries of two spacetimes originated by a pair of such initial data sets. This is done in vacuum by studying the Killing initial data (KIDs) of two corresponding CMC initial data sets.

Den Zoom-Link erhalten Sie per E-Mail von Frau Martina Jung oder Frau Martina Neu.  
For participating online, please sign up by sending an email to Martina Jung or Martina Neu.

Hierzu wird herzlich eingeladen.

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