



## Oberseminar

### Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **06.02.2025** spricht um **14 Uhr s.t.** im Raum **S9 (C6H05)** und über Zoom

**Dr. Eric Y Ling**

(University of Copenhagen)

über das Thema

#### Existence of CMC Cauchy surfaces in cosmological spacetimes

CMC (constant mean curvature) Cauchy surfaces play an important role in mathematical relativity. For example, finding solutions to the vacuum Einstein constraint equations is simplified by assuming CMC initial data. In this talk, we review and extend some results concerning the existence (and nonexistence) of CMC Cauchy surfaces in cosmological spacetimes, i.e., Lorentzian manifolds with compact Cauchy surfaces satisfying the strong energy condition (Ricci nonnegative on timelike vectors). This talk is based on joint work with Greg Galloway and with Argam Ohanya.

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

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

Hierzu wird herzlich eingeladen.

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