



EINLADUNG

im Rahmen des Literaturseminars

zum Vortrag

von

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über

„On extensions of CMC-Bartnik data“

Abstract:

Bartnik data are a Riemannian 2-sphere of positive Gaussian curvature equipped with a non-negative function H to be thought of as its mean curvature in an ambient Riemannian 3-manifold. Mantoulidis and Schoen suggested a construction of asymptotically flat Riemannian 3-manifolds of non-negative scalar curvature which allows to isometrically embed given Bartnik data of vanishing mean curvature, i.e. $H=0$. They use their construction to explore — and disprove — stability of the Riemannian Penrose inequality. In collaboration with Cabrera Pacheco, McCormick, and Miao, we adapt their construction to constant mean curvature (CMC) Bartnik data, i.e. $H=\text{const.}>0$. Moreover, with Cabrera Pacheco and McCormick, we extend their construction to the asymptotically hyperbolic setting both for $H=0$ and for $H=\text{const.}>0$ Bartnik data.

I will present the construction as well as the motivation for such a construction which is related to Bartnik's quasi-local capacity/mass functional and its minimizing properties.

Zeit: Montag, 25.6.2018, 14.00

Ort: Arbeitsgruppe Gravitation, Währinger Straße 17,
Raum, 218, 2. Stock

gez.: P. Chrusciel, D. Fajman