EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **13.06.2024** spricht um **14 Uhr s.t.** im Raum **S9 (C6H05)** und über Zoom

Dr. Paul Sweeney
(Stony Brook University)

über das Thema

Tunnels and Scalar Curvature

Two different ways scalar curvature can characterize the sphere are described by the rigidity theorems of Llarull and of Marques-Neves. Associated with these rigidity theorems are two stability conjectures. In this talk, we will produce examples related to these stability conjectures. In order to construct these examples, we improve the Gromov-Lawson tunnel construction so that one can attach tunnels to a manifold with scalar curvature bounded below and only decrease the scalar curvature by an arbitrarily small amount. This allows a generalization of other examples that use tunnels such as the sewing construction of Basilio, Dodziuk, and Sormani, and the construction due to Basilio, Kazaras, and Sormani of an intrinsic flat limit with no geodesics. If time permits, we will discuss an application of tunnels to construct non-perturbative counterexamples to Min-Oo's conjecture.

Den Zoom-Link erhalten Sie per E-Mail von Rodrigo Avalos.

For participating online, please sign up by sending an email to Rodrigo Avalos.

Hierzu wird herzlich eingeladen.

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