EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-Naturwissenschaftliche Fakultät

Fachbereich Mathematik
AB Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **14.07.2022** spricht um **15 Uhr** im Raum **S9**

Dr. Mario B. Schulz
(Universität Münster)

über das Thema

Free boundary minimal surfaces in the unit ball

The case of the Euclidean unit ball as ambient manifold for free boundary minimal surfaces arises naturally in the study of extremal metrics for Steklov eigenvalues on surfaces with boundary and is therefore of particular interest.
Yet even in this specific case many fundamental questions remain open.
Two of the most basic ones can be phrased as follows:
(1) Can a surface of any given topology be realised as an embedded free boundary minimal surface in the 3-dimensional Euclidean unit ball? We answer this question affirmatively for surfaces with connected boundary and arbitrary genus.
(2) When they exist, are such embeddings unique up to ambient isometry? We answer this question in the strongest negative terms by providing pairs of non-isometric free boundary minimal surfaces with the same topology and symmetry group.

This is a joint work with Alessandro Carlotto and Giada Franz respectively David Wiygul

Hierzu wird herzlich eingeladen.

C. Cederbaum, M. Graf, G. Huisken