EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-Naturwissenschaftliche Fakultät

Fachbereich Mathematik
AB Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **14.12.2023** spricht um **14 Uhr s.t.** im Hörsaal **N15 (C-Bau) und über Zoom**

Dr. Joseph Hoisington
(Max-Planck-Institut für Mathematik - Bonn)

über das Thema

Infima of the Energy Functional in Homotopy Classes of Mappings of CP^N

We will determine the infimum of the energy in all homotopy classes of mappings from complex projective spaces to Riemannian manifolds, by showing that it is proportional to the infimal area in the homotopy class of mappings of the 2-sphere representing the induced action on the second homotopy group. We will also discuss some background and related results about stable harmonic mappings of complex projective spaces.

15.00 - 15.50 Uhr s.t Vortrag

Dr. Nicolas Marque
(Elie Cartan Institute of Lorraine - Nancy)

über das Thema

Q-curvature, 4th order mass

The ADM mas is a scalar metric quantity computed at the infinity of an Asymptotically Euclidean manifold. It has a physical meaning (mass of an isolated stellar object), a geometric weight (positivity and rigidity) and an analytic importance (in the Green function of the Yamabe operator), and it comes from the analysis of conserved quantities from a relativistic approach of gravitation.

If one changes the gravitational theory for a fourth order Lagrangian, the same analysis of conserved quantities yieds a fourth order mass. One can then show it has similar properties to the ADM mass, and a deeper analysis reveals its link to a fundamental geometric quantity: the Q-curvature.

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

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

Hierzu wird herzlich eingeladen.

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