Wintersemester 2020/21

**Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie**

Am Donnerstag, den **12.11.2020** spricht um **15:30 Uhr s. t.** per Videoübertragung

Dr. Daniel Stern
(University of Toronto)

über das Thema

Level set methods for scalar curvature in dimension three

I'll discuss some new tools for studying the influence of scalar curvature on 3-manifolds, exploiting a relationship between scalar curvature and the level sets of harmonic functions and $\mathbb{S}^1$-valued harmonic maps. These methods share features with the well-known minimal surface and inverse mean curvature flow techniques, while yielding some estimates reminiscent of those arising from Dirac operator methods. We'll describe applications to the study of the Thurston norm of closed 3-manifolds, and the ADM mass of asymptotically flat 3-manifolds. (Based in part on joint work with Hugh Bray, Demetre Kazaras, and Marcus Khuri.)

Hierzu wird herzlich eingeladen. Bei Interesse bitte per E-Mail an angelika.spoerer-schmidle@uni-tuebingen.de anmelden, um den Link zur Videoübertragung zu erhalten.

C. Cederbaum, G. Huisken, K. Kröncke