



## Oberseminar

### Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **28.11.2024** spricht um **14 Uhr s.t.** im Raum **S9 (C6H05)** und über Zoom

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(Universität Tübingen)

über das Thema

#### **Approach to aspects to Hamilton's conjecture via Potential Theory**

Ricci-pinchd three-manifolds are manifolds with a lower bound on the Ricci curvature in terms of the scalar curvature and a constant  $\varepsilon > 0$ , which is uniform for every point and direction of the manifold. This property provides some sort of isotropy to the manifold. From here, R. Hamilton formulated the Conjecture which states that when non-compact, connected and complete three-dimensional manifolds are Ricci-pinchd, then they are flat. The first proofs of this conjecture were based on Ricci flow and dealt with several technicalities. Consequently, Huisken and Körber's proved the conjecture by using Inverse Mean Curvature Flow. In this talk, I will talk about a new approach to prove the conjecture which is based on potential theory. In addition, to implement it we have to apply some theorems used for the proof of the positive mass theorem by Bray, Kazaras, Khuri and Stern. At the end, I will also mention a method of proving Hamilton's conjecture for three-manifolds with superquadratic volume growth via nonlinear potential theory (this is joint work with L. Benatti, F. Oronzio and A. Pluda).

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

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

Hierzu wird herzlich eingeladen.

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