



Mathematics Colloquium

On the canonical geometric structure of initial data for the Einstein equations

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Host: Jan Maas

I will start by recapping the recent results on the existence and uniqueness of constant mean curvature spheres that foliate the end of asymptotically flat Riemannian manifolds, completing a program initiated by G. Huisken and S.-T. Yau in the early nineties. Then I will explain how these results may be viewed as effective versions of the positive mass theorem. In the second half of my talk, I will focus on a conjecture due to R. Schoen related to the minimal surface proof of the positive mass theorem and the proof of this conjecture in three space dimensions in my joint work with O. Chodosh. In higher dimensions, I will discuss counterexamples to the general conjecture and the proof of an important special case from my joint work with T. Koerber.

Wednesday, March 6, 2024 03:30pm - 04:30pm

Raiffeisen Lecture Hall



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.