

GEOMETRIC ANALYSIS SEMINAR

Speaker: Davi Maximo
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Date: Thursday, May 6, 2021

Time: 11:00 AM

Location: Zoom

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Lecture Title:

The Waist Inequality and Positive Scalar Curvature

Abstract

The topology of three-manifolds with positive scalar curvature has been (mostly) known since the solution of the Poincare conjecture by Perelman. Indeed, they consist of connected sums of spherical space forms and $S^2 \times S^1$'s. In spite of this, their "shape" remains unknown and mysterious. Since a lower bound of scalar curvature can be preserved by a codimension two surgery, one may wonder about a description of the shape of such manifolds based on a codimension two data (in this case, 1-dimensional manifolds). In this talk, I will show results from a recent collaboration with Y. Liokumovich elucidating this question for closed three-manifolds.