

GEOMETRIC ANALYSIS SEMINAR

“Macroscopically minimal hypersurfaces”

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Abstract: A decades-old application of the second variation formula proves that if the scalar curvature of a closed 3-manifold is bounded below by that of the product of the hyperbolic plane with the line, then every 2-sided stable minimal surface has area at least that of the hyperbolic surface of the same genus. We can prove a coarser analogue of this statement, taking the appropriate notions of macroscopic scalar curvature and macroscopic minimizing hypersurface from Guth's 2010 proof of the systolic inequality for the n -dimensional torus. The appropriate analogue of hyperbolic area in this setting turns out to be the Gromov simplicial norm. Joint work with Kei Funano.

Wednesday, May 2nd, 2018

MIT, Room 2-131

Time: 4:00 PM

