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Joint Geometric Analysis Seminar

(Part of MIST program)

Enumerative problems on minimal surfaces

Prof. Adrian Chun-Pong Chu
Cornell University

Abstract

In the past two decades, we have witnessed rapid development in the construction of minimal surfaces using min-max theory. This includes Wang-Zhou's recent solution to Yau's 4 minimal spheres conjecture (1982) in generic metrics. In these 2 talks, I will present two results, based on our collaboration with Yangyang Li and Zhihan Wang: In every Riemannian 3-sphere of positive Ricci curvature, there exists at least (1) five minimal tori, and (2) one genus g minimal surface for every g .

We will first review min-max theory from the basics and then explain the idea of the proofs. The talks will only assume basic knowledge on minimal surfaces.

Date: January 5 (Monday) and January 7 (Wednesday), 2026
Time: 1:00pm-2:30pm
Venue: LSB 222

All are Welcome