

GEOMETRIC ANALYSIS SEMINAR

Speaker: Da Rong Cheng
University of Waterloo

Date: Thursday, April 1, 2021

Time: 11:00 AM

Location: Zoom

Zoom URL: notredame.zoom.us/j/96288130964?pwd=c2dDelJJTXhSdTBVSEtLYlI1NEdzZz09



Lecture Title:

Existence of constant mean curvature 2-spheres in Riemannian 3-spheres

Abstract

In this talk, I'll describe recent joint work with Xin Zhou, where we show that in a 3-sphere equipped with an arbitrary Riemannian metric, there exists a branched immersed 2-sphere with constant mean curvature H for almost every H . Moreover, the existence extends to all values of H when the target metric is positively curved. This latter result confirms, for the branched immersed case, a conjecture of Harold Rosenberg and Graham Smith.