THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Reverse conformally invariant Sobolev inequalities on the sphere

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Abstract

In this talk I will present a result about the optimization problem corresponding to the sharp constant in a conformally invariant Sobolev inequality on the n-dimensional sphere S^n involving an operator of order 2s > n. In this case the Sobolev exponent is negative. Our results extend existing ones to noninteger values of s. In particular, we obtain the sharp threshold value of s for the validity of a corresponding Sobolev inequality in all dimensions n >= 2. This is joint work with Rupert L. Frank (LMU Munich and Caltech) and Hanli Tang (Beijing Normal University).

Date: 23 September 2022 (Friday)

Time: 4:00pm

Zoom Meeting: https://hkust.zoom.us/j/94806161456 (Passcode: 826283)

All are Welcome!