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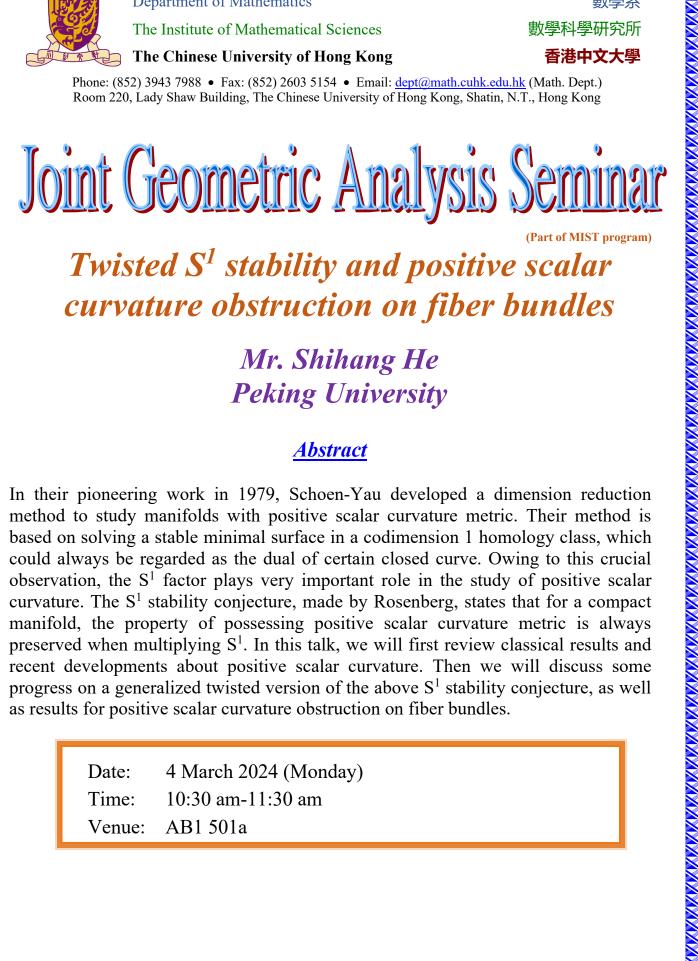
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## *Twisted* S<sup>1</sup> *stability and positive scalar* curvature obstruction on fiber bundles

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## Abstract

In their pioneering work in 1979, Schoen-Yau developed a dimension reduction method to study manifolds with positive scalar curvature metric. Their method is based on solving a stable minimal surface in a codimension 1 homology class, which could always be regarded as the dual of certain closed curve. Owing to this crucial observation, the S<sup>1</sup> factor plays very important role in the study of positive scalar curvature. The S<sup>1</sup> stability conjecture, made by Rosenberg, states that for a compact manifold, the property of possessing positive scalar curvature metric is always preserved when multiplying S<sup>1</sup>. In this talk, we will first review classical results and recent developments about positive scalar curvature. Then we will discuss some progress on a generalized twisted version of the above S<sup>1</sup> stability conjecture, as well as results for positive scalar curvature obstruction on fiber bundles.

> 4 March 2024 (Monday) Date: Time: 10:30 am-11:30 am Venue: AB1 501a

All are Welcome