



Department of Mathematics

The Institute of Mathematical Sciences

The Chinese University of Hong Kong

Phone: (852) 3943 7988 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk (Math. Dept.)
Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

數學系

數學科學研究所

香港中文大學

Joint Geometric Analysis Seminar

(Part of MIST program)

Rigidity of Riemannian Penrose inequality with corners and its implications

*Prof. Siyuan Lu
McMaster University*

Abstract

Motivated by the rigidity case in the localized Riemannian Penrose inequality, we show that suitable singular metrics attaining the optimal value in the Riemannian Penrose inequality is necessarily smooth in properly specified coordinates. If applied to hypersurfaces enclosing the horizon in a spatial Schwarzschild manifold, the result gives the rigidity of isometric hypersurfaces with the same mean curvature. This is a joint work with Pengzi Miao.

Date: 26 January 2022 (Wednesday)

Time: 10:00am – 11:00am (Hong Kong time)

ZOOM link: <https://cuhk.zoom.us/j/91805734715>*All are Welcome*