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# Joint Geometric Analysis Seminar

(Part of MIST program)

## *On a spacetime positive mass theorem with corners*

*Mr. Tin Yau Tsang*  
*University of California, Irvine*

### Abstract

Positive mass theorem asserts that an asymptotically flat initial data set satisfying the dominant energy condition has non-negative ADM mass. As revealed by the first minimal surface proof by Schoen and Yau, this theorem has a deep connection with scalar curvature geometry. Recently, Stern proposed a harmonic function's level set method to study scalar curvature. In this talk, we will talk about the applications of Stern's idea on positive mass theorem with corners which helps recall a relation between Physics (ADM mass, quasilocal mass) and geometry (Gromov's questions on boundary geometry). This is partly a joint work with Hirsch (Duke) and Miao (Miami).

Date: 15 October 2021 (Friday)

Time: 9:00am – 10:00am (Hong Kong time)

ZOOM link: <https://cuhk.zoom.us/j/91805734715>

*All are Welcome*