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# Joint Geometric Analysis Seminar

(Part of MIST program)

## *Hyperbolic $p$ -sum and Horospherical $p$ -Brunn-Minkowski theory in hyperbolic space*

*Mr. Botong Xu  
Tsinghua University*

### *Abstract*

In this talk, for any positive number  $p$ , we introduce the sum of two sets in hyperbolic space called the hyperbolic  $p$ -sum. Then we develop a Brunn-Minkowski theory in the hyperbolic space by using the hyperbolic  $p$ -sum, and we call it the horospherical  $p$ -Brunn-Minkowski theory. We will talk about some progress on the central problems in this theory, including the Horospherical  $p$ -Minkowski problem, the Horospherical  $p$ -Christoffel-Minkowski problem, the Horospherical  $p$ -Brunn-Minkowski inequality, and the Horospherical  $p$ -Minkowski inequality. This talk is based on joint work with Prof. Haizhong Li, arXiv: 2211.06875.

Date: January 27, 2023 (Friday)

Time: 3:00pm-4:00pm (Hong Kong time)

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

*All are Welcome*