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# Student Geometry Seminar

國立清華大學數學系 學生幾何研討會

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**講題** A Minkowski inequality on complete manifolds  
完備流形上的閔可夫斯基不等式

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**時間** 2024.06.18 (Tue) 16:30 – 18:00

**地點** 綜三 631

## Abstract

The classical Minkowski inequality implies the volume of a bounded convex domain in the Euclidean space is bounded by an integral of the mean curvature of its boundary. In this thesis, we obtain a version of such inequality without convexity assumptions for complete manifolds satisfying a weighted Poincare inequality. Additionally, we show that there are no embedded compact minimal surfaces on such manifolds.

在完備黎曼流形上，我們將討論閔可夫斯基不等式。假設該流形滿足加權龐加萊不等式，且里奇曲率有負值之下界。利用權重函數的增長，我們證明了閔可夫斯基不等式，而無需凸性條件。此外，我們還證明了該流形上不存在嵌入式緊緻極小曲面。

