

# 國立交通大學應用數學系

## 學術演講公告

主講人：陳瑞堂教授（國立台灣師範大學數學系）

講題：P-Laplacian on complete noncompact manifolds

時間：105 年 6 月 7 日(星期二) 下午 2:00 – 3:00

地點：(光復校區) 科學一館 223 室

茶會：當天下午 1:30 (科學一館 205 室)

### Abstract

In this talk, we consider  $p$ -Laplace operators on complete noncompact manifold  $M$ . First, we define the  $p$ -parabolic ends and  $p$ -hyperbolic ends according to the  $p$ -capacity on  $M$ , which imply the volume estimates of ends with positive  $p$ -spectrum. Next, if Ricci curvature of  $M$  has the lower bound depending on the spectrum of  $M$ , we show the Liouville properties for  $p$ -harmonic functions with finite  $p$ -energy, which also infer the topological property of this manifold, that is,  $M$  has at most one  $p$ -hyperbolic end. Finally, whenever sectional curvature of  $M$  has lower bound, we prove the gradient estimate of the positive eigenfunction associated to  $p$ -Laplace operator.

敬請公告 歡迎參加

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