

# 國立中山大學應用數學系

## 學術演講

講者：李卓彥 博士 (Institute of Mathematics, EPFL)

講題：The Hausdorff measure of the range and level sets of Gaussian random fields with sectorial local nondeterminism

時間：2021/12/02 (Thursday) 14:10 ~ 15:00

地點：視訊演講 (理 SC4009-1 教室)

Google Meet Link : <https://meet.google.com/efi-gwhp-ntp>



### Abstract

In this talk, I will discuss the local nondeterminism (LND) property of Gaussian random fields, and explain how we can apply this property to study their fractal properties, local times, and other sample path properties. In particular, I will consider a family of Gaussian random fields with the "sectorial LND" property, and present my results on the exact Hausdorff measure functions for their range and level sets, and a Chung-type law of the iterated logarithm. This family includes fractional Brownian sheets and the solutions of stochastic wave equations driven by Gaussian noise. I will also discuss how the results indicate some subtle differences between this sectorial LND family and the other family of Gaussian random fields with the "strong LND" property such as fractional Brownian motions and the solutions of stochastic heat equations.

敬請公告！歡迎參加！

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