國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 劉聚仁 先生

Mr. Gi-Jen Liu

臺灣大學數學系

National Taiwan University

講　題： **Multiple Wiener-Ito Integrals**

時　間： 2009 年 2 月 6 日 (星期五) 10:30-12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要： We will discuss some definitions about stationary generalized fields and then consider their wick product which is closely related to our topic about the structure of multiple Wiener integrals.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 陳鈺賢 先生

Mr. Yu-Shian Chen

臺灣大學數學系

National Taiwan University

講　題：

Second-order Regular Variation Functions and It's Application in Probability

時　間： 2009年2月13日 (星期五) 10:30~12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要： We will discuss the explicit form of limit functions of second-order regularly variarying functions for the generalized and specialized cases. Application to distributions with second-order regularly varying tail is considered. Moreover, Central Limit Theorem for Hill estimator is also discussed.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 謝南瑞 教授 Prof. Narn-Rueih Shieh

臺灣大學數學系 National Taiwan University

講　題： L\'evy-based Spatial-Temporal Random Fields

時　間： 2009 年 2 月 20 日 (星期五) 10:30-12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要： Let $X = \{X(t, x), t \in\setR, x\in\d\}$ be a L\'evy-based spatial-temporal random field proposed by Barndorff-Nielsen and Schmiegel (Russian Math Survey 2004) for dynamic modelling of turbulence. We introduce this BN-S space-time field, and describe some fractal geometry for this field, with a view toward a proper non-Gaussian aspect of B.B. Mandelbrot's paper in J. Fluid Mechanics 1974. Recent progress on multifractal scalings of the stationary exponential processes is also reported, and is toward the intermittency fields proposed in BN-S. The talk is based on the speaker’s article to appear in FRACTALS.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者：Dr. Takahiro Aoyama

Tokyo University of Science

講　題：

Characterizations of Some Subclasses of Infinitely Divisible Distributions on R^d by Stochastic Integrals; with comments by Professor Makoto Maejima (Keio University)

時　間： 2009 年 2 月 27 日 (星期五) 10:30-12:00

地　點：臺灣大學數學系新數學館 405 室

摘　要： A probability measure μ on Rd is called infinitely divisible if, for any positive integer n, there exist a probability measure μn on Rd such that $\mu = \mu n* n$, where $\mu n*$ is the n-th convolution of μ. Normal, Poisson, stable distributions and so on are of infinitely divisible and it is known as one of the most important class of probability distributions in probability theory and statistics fields. Recently, to characterize subclasses of infinitely divisible distributions by stochastic integrals with respect to L'evy processes has been well studied. In this lecture, we introduce basic properties related to works of Ken-iti Sato, and we show some recent results.

相關事宜請與梁宜婷小姐聯絡 Tel:(02)3366-9927 歡迎上網查詢　網址：http:// math.cts.ntu.edu.tw/

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國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 胡孟青 先生

Mr. Meng-Ching Hu

臺灣大學數學系

National Taiwan University

講　題：

Applied Probability Models of Networks

時　間：

2009 年 3 月 6 日 (星期五) 10:30 ~12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要：

We have shown that the infinite Poisson model will explain long-range dependence in measured Internet traffic. Now we discuss why stable Levy motion is a possible approximation.

相關事宜請與梁宜婷小姐聯絡 Tel:(02)3366-9927 歡迎上網查詢　網址：http:// math.cts.ntu.edu.tw/

歡迎參加　敬請公告

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 陳鈺賢 先生

Mr. Yu-Shian Chen

臺灣大學數學系

National Taiwan University

講　題：

Second-order Regular Variation Functions and It's Application in Probability (2)

時　間： 2009年3月13日 (星期五) 10:30~12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要： We will continue the contents from the last talk. Relationship between distribution with second-order regular variation tail and asymptotic normality of Hill's estimator is discussed.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 謝南瑞 教授

Prof. Narn-Rueih Shieh

臺灣大學數學系

National Taiwan University

講　題：

Some Stochastic Analysis related to L\'vey-driven OU-type Processes

時　間： 2009 年 3 月 20 日 (星期五) 10:30-12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要： In this talk, we describe how It\^o Calculus for semi-martingales is used to give some useful estimates concerning the exponential process $Y(t):=\exp {X(t) –c}$, where $X(t)$ is the unique stationary solution to the L\'evy- driven SDE $$ dX(t) = -\lambda X(t) dt+dZ(\lambda t). $$These estimates are key math in a paper on the nonlinear moment-scaling of such exponential processes, in Adv. Appl. Probab. 2008 (V. Anh, N. Leonenko, and N.-R. Shieh).

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者：蔡恆修 教授 Prof. Heng-Hsiu Tsai

中央研究院統計研究所 Academia Sinica

講　題：

From Long-memory to Non-negativity in Time Series Analysis

時　間：2009 年 3 月 27 日 (星期五) 10:30-12:00

地　點：臺灣大學數學系新數學館 405 室

摘　要：This talk consists of two parts. In the first part of the talk, I will introduce two long-memory processes: (1) a regression model with continuous-time long-memory errors, and (2) a long-memory limiting aggregate model. Application of these models, as well as maximum likelihood and quasi-likelihood estimation and their large sample properties will be discussed. The second part of my talk is about inequality parametric constraints for non-negative processes, which is mainly motivated by the needs for modeling volatility in financial time series data. I will talk about recent advances in the derivation of necessary and sufficient parametric conditions for non-negative processes.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 駱建陵 先生

Mr. Chien-Ling Lo

臺灣大學數學系

National Taiwan University

講　題：

Some symmetric properties in Asian options

時　間：

2009 年 4 月 10 日 (星期五) 10:30-12:00

地　點：

臺灣大學數學系新數學館 405 室

摘　要：

In this talk we introduce some useful symmetric properties in Asian options including the Asian-put-call parity and the symmetry between the floating and fixed-strike Asian options based on Henderson (2002).

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 劉聚仁 先生

Mr. Gi-Jen Liu

臺灣大學數學系

National Taiwan University

講　題：

Introduction to Fractional Reaction-Diffusion Equations

時　間： 2009 年 4 月 17 日 (星期五) 10:30-12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要：

Firstly, we will review some definitions about the fractional derivative. And then we will discuss some results about the stability near the equilibration points of nonlinear fractional reaction-diffusion systems by the method of linearization. All the results can refer to Gafiychuk etal 2008 paper: “Mathematical modeling of time fractional reaction-diffusion systems”.

國家理論科學研究中心數學組(臺北辦公室)

Activity in Probability

演講者： 謝南瑞 教授

Prof. Narn-Rueih Shieh

臺灣大學數學系

National Taiwan University

講　題：

A Tutorial on Burgers Dynamics

時　間： 2009 年 4 月 24 日 (星期五) 10:30-12:00

地　點： 臺灣大學數學系新數學館 405 室

摘　要：

Prof. W.A. Woyczynski will give a mini-course on Burgers Turbulence and Related Topics. In this talk, we give some analysis and probability knowledge for this course. The material and the notations are adapted from his LNM 1700 .

相關事宜請與梁宜婷小姐聯絡 Tel:(02)3366-9927 歡迎上網查詢　網址：http:// math.cts.ntu.edu.tw/

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