## 國立交通大學應用數學系 學術演講公告

(1) 主講人: Prof. Xiaoming Yuan(University of Hong Kong)

講 題:A Preliminary Understanding of Optimization: From Linear

Programming to Variational Inequalities

時 間:107年5月22日(星期二)下午1:20-2:10

地 點:(光復校區)科學一館223室

## Abstract

Optimization is science of making the best decision; or mathematically how to minimize a function subject to some given constraints which are also represented by function equations or inequalities. It plays a core role in various disciplines varying from economics, statistics, computer science, electronic engineering to scientific computing. In big-data era, Optimization is particularly important to offer faster algorithms to tackle mathematical models with huge datasets. In this talk, I will present some of my own understandings of Optimization, starting from the standard linear programming to integer programming, then a geometric understanding of the essence of KKT condition for nonlinear programming and a benchmark algorithm for a class of nonlinear programming models; and finally some essences of the variational inequalities and complementarity problems. Particularly, I will mention some interesting applications of different models in economics and image processing. This talk will be at introductory level and can be easily understood by undergraduates.

(2) 主講人: 余冠儒 先生 (Technical University of Vienna)

講 題:Analysis of Random Rooted Planar Maps via Generating Functions

時 間:107年5月22日(星期二)下午2:20-3:10

地 點:(光復校區)科學一館 223 室

## Abstract.

In this talk, I will introduce a way to count rooted maps and provide a combinatorial approach to determine limiting probabilities of rooted pattern occurrences in random planar maps. The proofs are based on generating functions and singularity analysis.

## 敬請公告 歡迎參加

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