



統計科學研究所

INSTITUTE OF
STATISTICAL SCIENCE



統計所學術演講



中研院統計所

學術演講

講題：Challenges and Opportunities in Applied Mathematics, Statistics and Data Science for Cancer Research

講者：Dr. Yu Shyr (石瑜博士)

(Department of Biostatistics, Vanderbilt University School of Medicine, U.S.A.)

時間：2022年12月27日(星期二)，16:00-17:30

地點：環變大樓1樓演講廳

Abstract

The key concepts of precision medicine are prevention and treatment strategies that take individual molecular profile and clinical information into account. Single-cell next-generation sequencing technologies (NGS), liquid biopsy for circulating tumor DNA (ctDNA) analysis, microbiomics, radiomics, spatial omics, and other types of high-throughput assays have exploded in popularity in recent years, thanks to their ability to produce an enormous volume of data quickly and at relatively low cost.

In this presentation, I will offer some perspectives on the changing landscape for applied mathematical and statistical science, including the concept of treating unstructured text as quantitative data; the need for statisticians to adjust their mindset around the explosive growth in information technology; machine learning; and the AI revolution. These areas present great opportunities for our profession to strengthen our role in the data science arena. I will finish up with my recent research about single cell RNA-seq data analysis which we developed a new method to identify dysregulated ligand-receptor interactions from single cell transcriptomics.

※ 茶會：15：40。

※ 實體與線上視訊同步進行。