数学与系统科学研究院

计算数学所网络学术报告

报告人：　**Prof. Yinyu Ye**

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报告题目：

Optimization and Operations Research in Mitigation of a Pandemic

邀请人：　戴彧虹 研究员

报告时间：**2020** 年 **5** 月 **17** 日（周日）

下午 **13:00-14:30**

报告工具：腾讯会议直播地址

https://meeting.tencent.com/l/5QqnVn49ac58

Abstract:

We present several Optimization, Statistics and Operations Research models and methods in mitigation of a pandemic. In particular, we describe in details of following topics:

1) Linear Programming models and solvers for efficient supply-chain management of medical equipment/materials under uncertain infections/demands at different hospitals/locations/regions.

2) Robust/Stochastic Optimization and Statistical Learning methods to identify vulnerable or hi-risk groups in general population and Graph Theory models to reduce the risk of these groups being infected/contacted.

3) Mathematical Optimization methods for decision making while enforcing Social-Distance constraints and Contact-Tracing by Sensor Network Localization

4) A Market Platform of allocating public and/or commercial goods/spaces, such as parks, beaches, gyms, theaters, etc., to meet the tight capacity restrictions.

5) Computer-Simulation-Based Stress Testing to analyze how a health-care system fare in drastic and rare scenarios.

欢迎大家参加！