## 深圳北理莫斯科大学

SHENZHEN MSU-BIT UNIVERSITY

# 应用数学讲座

### Научный Семинар по Прикладной Математике

### **Research Seminar on Applied Mathematics**

## 应用数学报告(33)

报告人 / Докладчик / Speaker: 李雅樵 高级讲师

题目 / Название / Title: New models and problems for Online Coloring

时间 / Время / Time: 11 Mar. 2022, 10:00-11:00

地点 / Mecто / Venue: 主楼 336

#### 摘要 / Аннотация / Abstract:

Graph coloring is an easy to understand but fundamental problem in both mathematics and computer science. Classic graph coloring studies the optimal number of colors needed to color a graph. Finding the least number of colors needed to color a graph is in general a difficult problem (NP-complete). With the development of computers and internet, there is also a lot of motivation to study how to optimally color online graphs, i.e., graphs that changes dynamically with time (e.g., social networks). Such study has potential applications in memory management such as GPRS and 5G, in processor assignment, in cloud computing, and interestingly also in some pure math problems. In this talk I will introduce a new yet natural model and new problems for online coloring. Some of our results beautifully refine the understanding of online coloring bipartite graphs.

#### 李雅樵高级讲师简介:

李雅樵博士现任深圳北理莫斯科大学工程系高级讲师。2019 年 11 月至 2021 年 7 月于加拿大蒙特利尔大学从事博士后研究。2019 年 10 月于加拿大麦吉尔大学计算机科学系获得博士学位。研究领域主要为计算复杂性,在线算法,及相关的数学问题。主要研究成果发表在 Theory of Computing, Theoretical computer science, Discrete Mathematics, Algorithmica, European Journal of Combinatorics 等高水平学术期刊。