2025 TALKS IN COMBINATORICS

陈曦，大连理工大学数学科学学院副教授、博士生导师，现任中国运筹学会图论组合分会理事、中国工业与应用数学学会图论组合及应用专委会委员。2015 年博士毕业于大连理工大学，曾赴密歇根州立大学联合培养一年、伦敦大学学院公派访问一年。研究方向为组合数学，主要研究兴趣包括组合矩阵的全正性和组合序列的解析性质等，在 *Adv Appl Math, European J Combin, Discrete Math* 等期刊发表论文十余篇，主持国家自然科学基金青年项目、面上项目。曾获中国运筹学会图论组合分会青年论文奖二等奖。

A unified planar network approach to totally positive matrices and polynomials with only real zeros

Totally positive matrices and polynomials with only real zeros have been widely studied in both pure and applied mathematics. In this talk, we present a common sufficient condition for the total positivity of combinatorial triangles and their reversals, as well as the real-rootedness of the generating functions of each row. The results can be applied to prove the total positivity and real-rootedness properties in many well-known combinatorial matrices, including the exponential Riordan arrays and the recursive matrices.

2025.1.3 (Fri) 9.50–10.50 am @Tencent: 918-697-768

邀请人：王国亮 glw@bit.edu.cn