中国科学院数学与系统科学研究院
Academy of Mathematics and Systems Science, CAS

图论组合与网络研究中心

Center for Graph Theory, Combinatorics and Networks

学术报告

题　　目： **T-perfect Graphs: Known and Unknown**

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时　　间： 7 月 29 日（星期六） 10: 00 – 11: 00

地　　点： 数学院南楼 N620

摘　　要： Perfect graphs have been pivotal in graph theory. Although the definition is purely graph-theoretical, Chvátal noticed that they can be characterized by their independent set polytopes. This motivated him to propose a similar polytope that comprises nonnegativity, edge, and odd-cycle constraints. A graph is t-perfect if this polytope is the independent set polytope of the graph. We start with briefly surveying known results, including minimally t-imperfect graphs and characterizations of t-perfect that are claw-free, P5-free, or fork-free. We then discuss several conjectures that may lead to the final understanding of t-perfect graphs.

报告人简介： Dr. Yixin Cao is an Associate Professor of Computing at Hong Kong Polytechnic University. He received a Ph.D. degree in computer science from Texas A&M University, USA, in 2012. Before returning to China, he was a research fellow at the Institute for Computer Science and Control, Hungarian Academy of Sciences. His research interests include algorithmic graph theory, fine-grained complexity and algorithm design, combinatorial optimization, and their usage in bioinformatics and social networks. His research is supported by the Hong Kong Research Grants Council (RGC) and the National Natural Science Foundation of China (NSFC).