

# 图论组合与网络研究中心

Center for Graph Theory, Combinatorics & Networks

## 学术报告

**题目：** Locally bi-2-transitive graphs and cycle-regular graphs

**报告人：** 周进鑫 教授（北京交通大学）

**时间：** 5月25日（星期四） 8:20-9:00, N620

**摘要：** In this talk, I shall discuss the characterization of edge-girth-regular and locally bi-2-transitive graphs of girth 3. It is proved that a graph  $G$  of girth 3 is edge-girth-regular and locally bi-2-transitive if and only if  $G$  is the line graph of a semi-symmetric locally 3-transitive graph. Then as an application, we prove that every tetravalent edge-girth-regular locally bi-2-transitive graph of girth 3 is cycle-regular. This shows that vertex-transitive cycle-regular graphs need not to be edge-transitive, and hence resolves the problem posed by Fouquet and Hahn from 2001.

**个人简介：** 周进鑫，北京交通大学数学与统计学院教授、博导。2008年获北京交通大学博士学位，主要致力于图的对称性及相关问题研究，在凯莱图、双凯莱图、及齐性图方面取得了系列理论创新成果，解决了包括 Godsil、Seress、Cai Heng Li、Marusic、Hahn、徐明曜等国际知名学者提出的若干公开问题。在 JCTA、JCTB、Combinatorica、J. Algebra 等组合数学、图论、代数学领域权威期刊发表 90 余篇。