



Department of Mathematics

COLLOQUIUM
and
Operations Research Group Seminar (ORG)

May 15, 2009 (Friday)

4:00 – 5:00pm

Room 517, Meng Wah Complex, HKU

Group Connectivity of Graphs

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Abstract

In the 1950s Tutte first developed the theory of nowhere zero flows, as a tool to attack the then 4-color-problem. Motivated by Tutte's fascinating flow conjectures, the theory of nowhere zero flows has now become one of the main research streams in graph theory. In 1992 Jaeger, Linial, Payan and Tarsi further introduced the concept of group connectivity, the nonhomogeneous version of nowhere zero flows. To be precise, given a graph G with a fixed orientation, and given an abelian group A , if for any map $b : V(G) \mapsto A$ such that $\sum_{v \in V(G)} b(v) = 0$, there is always a map $f : E(G) \mapsto A - \{0\}$ such that at each vertex v , the net flow-out amount of f equals $b(v)$, then G is A -connected. Tutte's 3- and 5-flow conjectures have been extended to their group connectivity versions. In this talk, we will present a brief survey on the recent development of group connectivity of graphs, and the related unsolved problems.

All are Welcome

For further information, please contact org@maths.hku.hk or visit
<http://hkumath.hku.hk/~org>