THE UNIVERSITY   **OF HONG KONG**

Department of Mathematics

C O L L O Q U I U M

Total weight choosability of graphs

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Abstract

   Given a graph G and positive integers k, k', we say that G is (k, k')-total weight choosable if the following holds: For any list assignment L which assigns to each vertex v a set $L(v)$ of k real numbers (as permissible weights) and assigns to each edge e a set $L(e)$ of k' real numbers (as permissible weights), there is a mapping f which chooses one weight $f(v) \in L(v)$ for each vertex, and chooses one weight $f(e) \in L(e)$ for each edge so that for any two adjacent vertices u and v, $(\sum_{e \in E(u)} f(e)) + f(u) \neq (\sum_{e \in E(v)} f(e)) + f(v).$ We conjecture that every graph is (2, 2)-total weight choosable and every connected graph other than K_2 is (1, 3)-total weight choosable. In this talk, I will present some partial results concerning these conjectures and explain some of the methods used in attacking the conjectures.

Date:	**November 27, 2009 (Friday)**
Time:	**4:00 – 5:00pm**
Place:	**Room 210, Run Run Shaw Bldg., HKU**

All are welcome