
FLORA BOWDITCH, University of Victoria
Localized Structure in Graph Decompositions

A G -decomposition of K_v is called *balanced* if each vertex of K_v occurs in the same number of copies of G . In 2011, Dukes and Malloch provided an existence theory for balanced G -decompositions of K_v . Shortly afterwards, Bonisoli, Bonvicini, and Rinaldi introduced *degree-* and *orbit-balanced* G -decompositions. In this talk, we will first discuss these three types of balance and give some examples. We will then examine an existence theory for degree- and orbit-balanced G -decompositions of K_v , which can be modelled by coloured loops in G . We will conclude with a brief discussion about decomposing K_v into a family of graphs.