
ORTRUD OELLERMANN, University of Winnipeg
Cycle Structure in Graphs with Certain Local Properties

A graph is weakly pancyclic if it has a cycle of every length between the girth and the circumference. A graph is locally P for some graph property P if the subgraph induced by the open neighbourhood of every vertex has property P . Ryjáček conjectured that every locally connected graph is weakly pancyclic. Results in support of this conjecture for locally isometric graphs and locally connected graphs with sufficiently large minimum clustering coefficient are presented. It is shown that in many instances these graphs are cycle extendable. Related open problems are discussed.