
LUCAS MOL, The University of Winnipeg

The mean subtree order of graphs under edge addition

A *subtree* of a graph G is a subgraph of G that is a tree. The *mean subtree order* of G is the average order of the subtrees of G . We conjecture that every non-complete graph G contains a pair of nonadjacent vertices u and v such that adding the edge between u and v increases the mean subtree order, and we prove this conjecture in the case that G is a tree. We discuss several related open problems and conjectures. This is joint work with Ben Cameron (University of Guelph).