
LUCAS MOL, University of Winnipeg

The Mean Subtree Order and the Mean Connected Induced Subgraph Order

The *mean connected induced subgraph order* of a graph G is the average number of vertices in a connected induced subgraph of G . This parameter is an extension of the *mean subtree order* of a tree. We present a conceptually simple proof of the fact that the path has minimum mean subtree order among all trees of a given order. We then extend these ideas to show that the path has minimum mean connected induced subgraph order among all *block graphs* of a given order. This is joint work with Kristaps Balodis, Matthew Kroecker, and Ortrud Oellermann.