Graph decomposition

Carsten Thomassen
Department of Mathematics
Technical University of Denmark
DK-2800 Lyngby, Denmark.

November 14, 2007

Abstract

János Barát and I made the following conjecture: For every tree T, there is a natural number k_T such that every k_T-edge-connected graph of size divisible by $|E(T)|$ has an edge-decomposition into subgraphs each isomorphic to T. The conjecture is trivial when T has at most two edges. When we made the conjecture we could not prove it for one single tree with three or more edges. A few months ago I verified the conjecture for one tree. Very recently, I have verified it for a second tree.