



UDC 519.17

Minimal Edge Extensions of Palm Trees

D. D. Komarov

Saratov State University, Russia, 410012, Saratov, Astrahanskaya st., 83,, KomarovDD@gmail.com

Minimal edge extension of graphs can be regarded as a model of optimal edge fault tolerant implementation of a system. The problem of finding the minimal edge extensions of an arbitrary graph is NP-complete, that's why it is of interest to find classes of graphs for which it is possible to build a minimal edge extension analytically. This paper is about of the one-edge extensions of a graphs from a special class named palm trees. In this paper presents a kind of one-edge extension for some palm trees and the proof that it is minimal.

Key words: minimal extensions of graphs.

References

1. Harary F., Hayes J. P. Edge fault tolerance in graphs. *Networks*, 1993, no. 23, pp. 135–142.
2. Abrosimov M. B. Complexity of some problems associated with the extension of graphs. *Math. Notes*, 2010, vol. 88, no. 5, pp. 643–650.
3. Bogomolov A. M., Saliy V. N. Algebraicheskie osnovy teorii diskretnykh sistem [Algebraic foundations of the theory of discrete systems]. Moscow, Nauka, 1997, 368 p. (in Russian).