



Also available at <http://amc-journal.eu>
ISSN 1855-3966 (printed edn.), ISSN 1855-3974 (electronic edn.)
Ars Mathematica Contemporanea Volume 7, Issue 1, Year 2014, Pages 161-173

Petersen-colorings and some families of snarks

Jonas Hägglund, Eckhard Steffen

Abstract

In this paper we study Petersen-colorings and strong Petersen-colorings on some well known families of snarks, e.g. Blanuša snarks, Goldberg snarks and flower snarks. In particular, it is shown that flower snarks have a Petersen-coloring but they do not have a strong Petersen-coloring. Furthermore it is proved that possible minimum counterexamples to Jaeger's Petersen-coloring conjecture do not contain a specific subdivision of $K_{3,3}$.

Keywords

Petersen colorings, strong Petersen colorings, snarks

Math. Subj. Class.: [05C15](#) [05C21](#) [05C70](#)

Petersenova barvanja in nekatere družine snarkov

Povzetek

V članku obravnavamo Petersenova barvanja in krepka Petersenova barvanja nekaterih dobro znanih družin snarkov, npr. Blanuša snarkov, Goldbergovih snarkov in rožnih snarkov. Tako pokažemo, da imajo rožni snarki Petersenovo barvanje, da pa nimajo krepkega Petersenovega barvanja. Nadalje dokažemo, da možni minimalni protiprimeri k Jaegerjevi domnevi o Petersenovem barvanju ne vsebujejo določene subdivizije grafa $K_{3,3}$.

Keywords

Petersenova barvanja, krepka Petersenova barvanja, snarki