REMOVABLE EDGES ON A HAMILTON CYCLE OR OUTSIDE A CYCLE IN A 4-CONNECTED GRAPH

JICHANG WU\textsuperscript{a}, HAJO BROERSMA\textsuperscript{b}, YAPING MAO\textsuperscript{c}

AND

QIN MA\textsuperscript{d,2}

\textsuperscript{a}School of Mathematics
Shandong University, Jinan
Shandong 250100, China

\textsuperscript{b}Faculty of EEMCS, University of Twente
P.O. Box 217, 7500 AE Enschede, The Netherlands

\textsuperscript{c}Department of Mathematics
Qinghai Normal University
Xining, Qinghai 810008, China

\textsuperscript{d}Department of Biomedical Informatics
College of Medicine, Ohio State University
Columbus, OH, 43210, USA

e-mail: jichangwu@126.com
h.j.broersma@utwente.nl
maoyaping@ymail.com
qin.ma@osumc.edu

Abstract

Let \( G \) be a 4-connected graph. We call an edge \( e \) of \( G \) removable if the following sequence of operations results in a 4-connected graph: delete \( e \) from \( G \); if there are vertices with degree 3 in \( G - e \), then for each (of the at most two) such vertex \( x \), delete \( x \) from \( G - e \) and turn the three neighbors of \( x \) into a clique by adding any missing edges (avoiding multiple edges). In this paper, we continue the study on the distribution of removable edges in a 4-connected graph \( G \), in particular outside a cycle of \( G \) or in a spanning tree or on a Hamilton cycle of \( G \). We give examples to show that our results are in some sense best possible.

Keywords: 4-connected graph, removable edge, fragment, atom.

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\textsuperscript{2}Corresponding author.
1. Introduction

References


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