A NOTE ON NEIGHBOR EXPANDED SUM DISTINGUISHING INDEX

EVELYNE FLANDRIN\textsuperscript{a}, HAO LI\textsuperscript{a}, ANTONI MARCZYK\textsuperscript{b,2}

JEAN-FRANÇOIS SACLÉ\textsuperscript{a} AND MARIUSZ WOŹNIAK\textsuperscript{b}

\textsuperscript{a}LRI, UMR 8623, Université de Paris-Sud
Bât. 650, rue Noetzlin, Gif-sur-Yvette, France

\textsuperscript{b}AGH University, Department of Discrete Mathematics
Al. Mickiewicza 30, 30-059 Kraków, Poland

e-mail: marczyk@agh.edu.pl

Abstract

A total \( k \)-coloring of a graph \( G \) is a coloring of vertices and edges of \( G \)
using colors of the set \([k] = \{1, \ldots, k\}\). These colors can be used to distin-
guish the vertices of \( G \). There are many possibilities of such a distinction.
In this paper, we consider the sum of colors on incident edges and adjacent
vertices.

Keywords: general edge coloring, total coloring, neighbor-distinguishing
index, neighbor sum distinguishing coloring.

2010 Mathematics Subject Classification: 05C15.

References

[1] J.A. Bondy and U.S.R. Murty, Graph Theory with Applications (Macmillan, Lon-
don, 1976).

University in Pozna’n, 2010).

doi:10.1016/j.jctb.2009.06.002

\textsuperscript{1}The work of the third author was partially supported by the Polish Ministry of Science
and Higher Education. The research of the fifth author was supported by the Polish National
Science Center grant no. DEC-2013/09/B/ST1/01772.

\textsuperscript{2}Corresponding author.


Received 26 June 2015
Revised 1 February 2016
Accepted 1 February 2016