ON GREGUS-ĆIRIĆ MAPPINGS ON WEIGHTED GRAPHS

MONTHER RASHED ALFURAIDAN* AND MOHAMED AMINE KHAMSI**

*Department of Mathematics & Statistics
King Fahd University of Petroleum and Minerals
Dhahran 31261, Saudi Arabia
E-mail: monther@kfupm.edu.sa

**Department of Mathematical Sciences
University of Texas at El Paso
El Paso, TX 79968, USA
E-mail: mohamed@utep.edu

Abstract. In this paper, we introduce the concept of monotone Gregus-Čirić-contraction mappings in weighted digraphs. Then we establish a fixed point theorem for monotone Gregus-Čirić-contraction mappings defined in convex weighted digraphs.

Key Words and Phrases: Fixed point, Gregus-Čirić-contraction, monotone mappings, weighted graph.

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REFERENCES


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