

A FIXED POINT THEOREM FOR MATKOWSKI CONTRACTIONS

SIMEON REICH* AND ALEXANDER J. ZASLAVSKI**

*Department of Mathematics
The Technion-Israel Institute of Technology
32000 Haifa, Israel
E-mail: sreichtx.technion.ac.il

**Department of Mathematics
The Technion-Israel Institute of Technology
32000 Haifa, Israel
E-mail: ajzasltx.technion.ac.il

Abstract. We establish a fixed point theorem for Matkowski contractions. Our result is concerned with the case where such mappings take a nonempty, closed subset of a complete metric space X into X .

Key Words and Phrases: Contraction, complete metric space, fixed point, iteration

2000 Mathematics Subject Classification: 47H10, 54E50, 54H25.

REFERENCES

- [1] S. Banach, *Sur les opérations dans les ensembles abstraits et leur application aux équations intégrales*, Fund. Math., **3**(1922), 133-181.
- [2] W.A. Kirk, *Contraction mappings and extensions*, Handbook of Metric Fixed Point Theory, Kluwer, Dordrecht, 2001, 1-34.
- [3] J. Matkowski, *Integrable solutions of functional equations*, Dissertationes Math., **127**(1975), 1-68.
- [4] D. Reem, S. Reich and A.J. Zaslavski, *Two results in metric fixed point theory*, Journal of Fixed Point Theory and Applications, **1**(2007), 149-157.

Received: April 26, 2007; Accepted: July 19, 2007.