APPROXIMATING FIXED POINTS OF ALMOST CONVEX CONTRACTIONS IN METRIC SPACES*

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Dedicated to Dr. Vasile Drăgan on the occasion of his 70th anniversary

Abstract

In this paper we introduce a new class of mappings, obtained by merging the concepts of *almost contraction* and *convex contraction* and called *almost convex contractions*. This general class includes both the *almost contractions* and *convex contractions*. Existence fixed point theorems for almost convex contractions of order 2 and of order p are established.

MSC: 47H09, 47H10, 54H25

keywords: metric space, convex contraction, almost contraction, fixed point.

1 Introduction

In a series of papers published in the period 1981-1983, Istrăţescu [37]-[39] introduced and studied the concept of *convex contraction*. Except for a few echoes ([36], [50]) this concept did not generate very much interest in

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