

**COMMON FIXED POINTS OF A PAIR OF SUZUKI  
 $\mathcal{Z}$ -CONTRACTION TYPE MAPS IN  $b$ -METRIC SPACES**

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**Abstract:** In this paper, we introduce Suzuki  $\mathcal{Z}$ -contraction type (I) maps, Suzuki  $\mathcal{Z}$ -contraction type (II) maps, for a pair of selfmaps in  $b$ -metric spaces and prove the existence and uniqueness of common fixed points. We draw some corollaries to our results and provide examples in support of our results.

**Keywords and Phrases:** Common fixed point,  $b$ -metric space,  $b$ -continuous, Suzuki  $\mathcal{Z}$ -contraction type maps.

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## **1. Introduction**

Nonlinear analysis plays an important role in many branches of Applied Sciences, for latest works, we refer [13, 20, 24, 25, 26]. Particularly, fixed point theory is a part of nonlinear analysis and its development depends on the generalization of contraction conditions or/and generalization of ambient spaces of the operator under consideration. In 1975, Dass and Gupta [12] established fixed point results using contraction condition involving rational expressions and proved the existence of fixed points in complete metric spaces. In 2008, Suzuki [28] proved two fixed