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# FIXED POINTS OF COMPLEX VALUED $A_b$-METRIC SPACE

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**Abstract:** In this paper, we introduce the concept of complex valued $A_b$-metric space and prove some fixed point theorems. Examples are also given as a support of our results.

**Keywords and Phrases:** $A_b$-metric space, Complex valued metric space, Complex valued $A_b$-metric space, fixed point, Kannan's fixed point theorem.

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## 1. Introduction

Azam et al. [1] introduced the concept of complex valued metric space and proved some fixed point results for a pair of mappings for a contraction condition satisfying a rational expression. Moreover, Shin Min Kang et al.[11] introduced the notion of complex valued G-metric space and proved contraction principle in this space. Rao et al. [2] introduced the concept of complex valued b-metric space in 2013. In 2014, Nabil M. Mlaiki [8] introduced complex valued S-metric space and proved the existence and the uniqueness of a common fixed point of two self mappings in this space. Recently, Ozgur [10] introduced the concept of complex valued $G_b$-metric space and proved Banach contraction principle and Kannan's fixed point theorem in this new space. Priyobarta et al. [9] also extended the