



ON $\mathcal{J}\mathcal{K}$ -STATISTICAL CONVERGENCE OF SEQUENCES OF BI-COMPLEX NUMBERS

JUWEL HOSSAIN

Department of Mathematics, Tripura University, Agartala,
799022, Tripura, India
(E-mail: juweljoya123@gmail.com)

SHYAMAL DEBNATH

Department of Mathematics, Tripura University, Agartala,
799022, Tripura, India
(E-mail: shyamalnitamath@gmail.com)

MIJANUR RAHMAN

Department of Mathematics, Tripura University, Agartala,
799022, Tripura, India
(E-mail: mijanurrahman348m@gmail.com)

and

HAMARI DEBBARMA

Department of Mathematics, Tripura University, Agartala,
799022, Tripura, India
(E-mail: debbarmah07@gmail.com)

Abstract. In this paper, we extend the notion of $\mathcal{J}\mathcal{K}$ -convergence of sequences of bi-complex numbers to $\mathcal{J}\mathcal{K}$ -statistical convergence by using the notion of $\mathcal{K}$ -statistical convergence. We investigate some of its properties and study its relation with some other known types of convergence.

Communicated by Editors; Received February 3, 2026

AMS Subject Classification: 40A05, 40A35, 46A45.

Keywords: Bi-complex number, Ideal, Filter, $\mathcal{J}\mathcal{K}$ -convergence, $\mathcal{J}\mathcal{K}$ -statistical convergence.