3–VARIABLE DOUBLE $\rho$–FUNCTIONAL INEQUALITIES OF DRYGAS

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Abstract. Drygas introduced the functional equation $f(x+y) + f(x-y) = 2f(x) + f(y) + f(-y)$ in quasi-inner product spaces. In this paper, we introduce and solve 3-variable double $\rho$-functional inequalities associated to the functional equation $f(x+y+z) + f(x+y-z) = 2f(x) + 2f(y) + f(z) + f(-z)$. Moreover, we prove the Hyers-Ulam stability of the 3-variable double $\rho$-functional inequalities in complex Banach spaces.


Keywords and phrases: Drygas functional equation, Hyers-Ulam stability, double $\rho$-functional inequalities, Banach space.

REFERENCES


