ON HYERS–ULAM–RASSIAS STABILITY OF A QUADRATIC FUNCTIONAL EQUATION

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Abstract. In this paper, we investigate the Hyers-Ulam-Rassias stability of a new quadratic functional equation

\[ f(x + y + z + w) + 2f(x) + 2f(y) + 2f(z) + 2f(w) = f(x + y) + f(y + z) + f(z + x) + f(x + w) + f(y + w) + f(z + w). \]

Moreover, the stability results will be applied to the study of an interesting asymptotic property of the quadratic function.

Key words and phrases: Hyers-Ulam-Rassias stability; quadratic functional equation.

REFERENCES