ON THE ALEKSANDROV–RASSIAS PROBLEM AND THE HYERS–ULAM–RASSIAS STABILITY PROBLEM

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This paper is dedicated to Professor Themistocles M. Rassias.

Submitted by C. Park

ABSTRACT. Let X and Y be normed linear spaces. A mapping $T : X \to Y$ is called preserving the distance r if for all x, y of X with $\|x - y\|_X = r$ then $\|T(x) - T(y)\| = r$. In this paper, we provide an overall account of the development of the Aleksandrov problem, the Aleksandrov–Rassias problem for mappings which preserve distances and details for the Hyers–Ulam–Rassias stability problem.

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