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Hyers-Ulam--Rassias Stability of Derivations

Consider the functional equation $\mathcal{E}_1(f) = \mathcal{E}_2(f)$ (\mathcal{E}) in a certain framework. We say that a function f_0 is an approximate solution of (\mathcal{E}) if $\mathcal{E}_1(f_0)$ and $\mathcal{E}_2(f_0)$ are close in some sense.

The stability problem is whether or not there is a true solution of (\mathcal{E}) near f_0 . During the last decades the problem has been extensively investigated by several mathematicians. In this talk, the Hyers–Ulam–Rassias stability of various types of derivations on Banach algebras into Banach bimodules are discussed. The Cauchy–Rassias inequality is used. This inequality was introduced for the first time by Th. M. Rassias.

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