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The hyperstability of general linear equation via that of Cauchy equation. (English)

Zbl 1417.39085

Aequationes Math. 93, No. 4, 781-789 (2019).

The task of a hyperstability problem is to understand when a function which approximately satisfies a functional equation is also a solution of it. *M. Piszczek* [Aequationes Math. 88, No. 1–2, 163–168 (2014; Zbl 1304.39033)] proved a hyperstability result for general linear equation $f(ax + by) = Af(x) + Bf(y)$. *J. Brzdęk* [Acta Math. Hung. 141, No. 1–2, 58–67 (2013; Zbl 1313.39037)] and proved the hyperstability of the Cauchy equation $f(x + y) = f(x) + f(y)$. In the paper under review, the authors show that the result of Piszczek can be deduced from that of Brzdęk.

Reviewer: [Mohammad Sal Moslehian \(Mashhad\)](#)

MSC:

- [39B82](#) Stability, separation, extension, and related topics for functional equations
- [39B62](#) Functional inequalities, including subadditivity, convexity, etc.
- [47H14](#) Perturbations of nonlinear operators
- [47J20](#) Variational and other types of inequalities involving nonlinear operators (general)

Cited in **2** Documents

Keywords:

[hyperstability](#); [general linear equation](#); [Cauchy equation](#)

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