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Generalized Jensen's equations in Banach modules over a C^* -algebra and its unitary group.

(English) [Zbl 1073.39019](#)

Taiwanese J. Math. 7, No. 4, 641-655 (2003).

A result on the Ulam-Hyers-Rassias stability of some generalization of the Jensen functional equation in Banach modules over a C^* -algebra is presented. This result is applied to establish some characterizations of self-adjoint operators, normal operators, unitary operators and projections.

For more information about the problem of stability of functional equations see the reviewer [Functional equations and inequalities in several variables (World Scientific, New Jersey-London-Singapore-Hong Kong) (2002; [Zbl 1011.39019](#))].

Reviewer: [Stefan Czerwik \(Gliwice\)](#)

MSC:

- [39B82](#) Stability, separation, extension, and related topics for functional equations
- [46L05](#) General theory of C^* -algebras
- [39B52](#) Functional equations for functions with more general domains and/or ranges
- [47A45](#) Canonical models for contractions and nonselfadjoint linear operators
- [47B15](#) Hermitian and normal operators (spectral measures, functional calculus, etc.)

Cited in **7** Documents

Keywords:

Ulam-Hyers-Rassias stability; generalized Jensen functional equation; Banach module over C^* -algebra; self-adjoint operators; normal operators; unitary operators; projections

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