

## MULTILINEAR JENSEN TYPE MAPPINGS IN BANACH MODULES OVER A $C^*$ -ALGEBRA

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*Abstract.* We prove the stability of multilinear Jensen type functional equations in Banach modules over a unital  $C^*$ -algebra.

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*Key words and phrases:* Banach module over  $C^*$ -algebra, stability, unitary group, multilinear Jensen type functional equation.

### REFERENCES

- [1] F. BONSALL, J. DUNCAN, *Complete Normed Algebras*, Springer-Verlag, New York, Heidelberg and Berlin, 1973.
- [2] R. KADISON, G. PEDERSEN, *Means and convex combinations of unitary operators*, Math. Scand. **57** (1985), 249–266.
- [3] C. PARK, *Multi-quadratic mappings in Banach spaces*, Proc. Amer. Math. Soc. **131** (2003), 2501–2504.
- [4] C. PARK, *Multilinear Trif  $d$ -mappings in Banach modules over a  $C^*$ -algebra*, Rocky Mountain J. Math. **35** (2005), 641–654.
- [5] TH.M. RASSIAS, *On the stability of the linear mapping in Banach spaces*, Proc. Amer. Math. Soc. **72** (1978), 297–300.
- [6] H. SCHRODER, *K-Theory for Real  $C^*$ -Algebras and Applications*, Pitman Research Notes in Mathematics, vol. 290, Longman, Essex, 1993.