

## A STRONG QUADRATIC FUNCTIONAL EQUATION IN $C^*$ -ALGEBRAS

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**Abstract.** In this paper, we use a fixed point method to investigate the problem of stability on  $C^*$ -algebras of the strong quadratic functional equation

$$f(x) + f(y) = f(\sqrt{xx^* + yy^*}).$$

**Key Words and Phrases:** Generalized Hyers-Ulam stability, quadratic function,  $C^*$ -algebra, generalized metric space, fixed point.

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