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## The N-Isometric Isomorphisms in Linear N-normed $\mathcal{C}^*$ -Algebras

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摘要

关键词 [Hyers--Ulam stability](#) [Trif's mapping](#) [linear  \$\mathcal{N}\$ -normed Banach module over  \$\mathcal{C}^\*\$ -algebra](#)  [\$\mathcal{N}\$ -isometric isomorphism](#)

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**Abstract** We prove the Hyers--Ulam stability of linear  $\mathcal{N}$ -isometries in linear  $\mathcal{N}$ -normed Banach modules over a unital  $\mathcal{C}^*$ -algebra. The main purpose of this paper is to investigate  $\mathcal{N}$ -isometric  $\mathcal{C}^*$ -algebra isomorphisms between linear  $\mathcal{N}$ -normed  $\mathcal{C}^*$ -algebras,  $\mathcal{N}$ -isometric Poisson  $\mathcal{C}^*$ -algebra isomorphisms between linear  $\mathcal{N}$ -normed Poisson  $\mathcal{C}^*$ -algebras,  $\mathcal{N}$ -isometric Lie  $\mathcal{C}^*$ -algebra isomorphisms between linear  $\mathcal{N}$ -normed Lie  $\mathcal{C}^*$ -algebras,  $\mathcal{N}$ -isometric Poisson  $\mathcal{J}\mathcal{C}^*$ -algebra isomorphisms between linear  $\mathcal{N}$ -normed Poisson  $\mathcal{J}\mathcal{C}^*$ -algebras, and  $\mathcal{N}$ -isometric Lie  $\mathcal{J}\mathcal{C}^*$ -algebra isomorphisms between linear  $\mathcal{N}$ -normed Lie  $\mathcal{J}\mathcal{C}^*$ -algebras. Moreover, we prove the Hyers--Ulam stability of their  $\mathcal{N}$ -isometric homomorphisms.

**Key words** [Hyers--Ulam stability](#) [Trif's mapping](#) [linear  \$\mathcal{N}\$ -normed Banach module over  \$\mathcal{C}^\*\$ -algebra](#)  [\$\mathcal{N}\$ -isometric isomorphism](#)

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