Kuznetsova, Yulia; Zadeh, Safoura
On isomorphisms between weighted \( L^p \)-algebras. (English) Zbl 07451289

Summary: Let \( G \) be a locally compact group and let \( \omega \) be a continuous weight on \( G \). In this paper, we first characterize bicontinuous biseparating algebra isomorphisms between weighted \( L^p \)-algebras. As a result, we extend previous results of Edwards, Parrott, and Strichartz on algebra isomorphisms between \( L^p \)-algebras to the setting of weighted \( L^p \)-algebras. We then study the automorphisms of certain weighted \( L^p \)-algebras on integers, applying known results on composition operators to classical function spaces.

MSC:
43A20 \( L^1 \)-algebras on groups, semigroups, etc.
43A22 Homomorphisms and multipliers of function spaces on groups, semigroups, etc.

Keywords:
locally compact groups; weighted \( L^p \) algebras; topological group isomorphisms; biseparating isomorphism; small bound isomorphism

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References:


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