

Amir Sahami, Mohammad R. Omid, Eghbal Ghaderi, Hamzeh Zangeneh

Approximate biflatness and Johnson pseudo-contractibility of some Banach algebras

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Abstract: We study the structure of Lipschitz algebras under the notions of approximate biflatness and Johnson pseudo-contractibility. We show that for a compact metric space X , the Lipschitz algebras $\text{Lip}_\alpha(X)$ and $\text{lip}_\alpha(X)$ are approximately biflat if and only if X is finite, provided that $0 < \alpha < 1$. We give a necessary and sufficient condition that a vector-valued Lipschitz algebras is Johnson pseudo-contractible. We also show that some triangular Banach algebras are not approximately biflat.

Keywords: approximate biflatness; Johnson pseudo-contractibility; Lipschitz algebra; triangular Banach algebra

AMS Subject Classification: 46M10, 46H20, 46H05

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