

Banach Algebras 2009

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On strict homological dimensions of algebras of continuous functions.

ABSTRACT. In 1972 A. Ya. Helemskii proved that the global dimension of any Banach function algebra is never equal to one. This result is not valid in pure algebra or in the theory of locally convex algebras. We consider algebras of continuous functions in the framework of the homological theory of strict Banach algebras, constructed by Kurmakaeva in 1990. We show that in this setting the global dimension of a function algebra can take any non-negative integer value.