

عنوان مقاله:

Sequences of contractions on cone metric spaces over Banach algebras and applications to nonlinear systems of equations and systems of differential equations

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نویسنده:

Tiberiu Popoviciu Institute of Romanian Academy, Cluj-Napoca, Romania - - -

خلاصه مقاله:

It is well known that fixed point problems of contractive-type mappings defined on cone metric spaces over Banach algebras are not equivalent to those in usual metric spaces (see [3] and [10]). In this framework, the novelty of the present paper represents the development of some fixed point results regarding sequences of contractions in the setting of cone metric spaces over Banach algebras. Furthermore, some examples are given in order to strengthen our new concepts. Also, based on the powerful notion of a cone metric space over a Banach algebra, we present important applications to systems of differential equations and coupled functional equations, respectively, that are linked to the concept of sequences of contractions.

کلمات کلیدی:

Banach algebras, (G)-convergence, (H)-convergence, differential equations, fixed points, sequences of contractions

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