

### عنوان مقاله:

A study on Langevin equation with three different fractional orders

### محل انتشار:

مجله آنالیز غیر خطی و کاربردها، دوره 12، شماره 0 (سال: 1400)

تعداد صفحات اصل مقاله: 9

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### خلاصه مقاله:

Using a novel norm that is comfy for fractional and singular differential equations the existence and uniqueness of IVP for new type nonlinear Langevin equations involving three fractional orders are discussed. This norm is a tool to measure how far a numerical solution is from the exact one. New results are based on the contraction mapping principle. Lemma ۲.۲ has a prominent role in proving the main theorem. The fractional derivatives are described in .Caputo sense. Two examples are presented to illustrate the theory

### کلمات کلیدی:

Fractional Langevin equation, Fixed point theorem, Existence results

### لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1561431>

