

## Stability analysis of conformable fractional order nonlinear systems

Ghania Rebiai<sup>1,1</sup>, Abdellatif Ben Makhlouf <sup>2,2</sup>, Mohamed Ali Hammami <sup>2</sup>,  
Assia Guezane-Lakoud<sup>3</sup>

<sup>1</sup> *Department of Mathematics, University of Guelma, Guelma, Algeria*

<sup>2</sup> *Department of Mathematics, Faculty of Sciences, Sfax University, Tunis*

<sup>3</sup> *Department of Mathematics, Faculty of Sciences, Badji Mokhtar University,  
Annaba, Algeria*

*E-mail: <sup>1</sup>rebeai\_ghania@yahoo.fr, <sup>1</sup>benmakhloufabdellatif@gmail.com,  
a\_guezane@yahoo.fr*

**Abstract:** In this paper, we study the uniformly fractional exponential stability for some class of systems like class of perturbed systems and class of nonlinear fractional-order equations with control using the Lyapunov-like function.

**Keywords:** Conformable fractional derivative, fractional practical exponential stability.