Corrigendum to the paper: New conditions for the exponential stability of fractionally perturbed ODEs, EJQTDE, No. 84 (2018), 1–14

Milan Medved¹ and Eva Brestovanská²

¹Department of Mathematical Analysis and Numerical Mathematics, Faculty of Mathematics, Physics and Informatics, Comenius University, 842 48 Bratislava, Slovakia
²Department of Economics and Finance, Faculty of Management, Comenius University, Odbojárov 10, 831 04 Bratislava, Slovakia

Received 23 November 2018, appeared 26 December 2018
Communicated by Nickolai Kosmatov

Abstract. This paper serves as a corrigendum to the paper [Electron. J. Qual. Theor. Differ. Equ. 2018, No. 84, 1–14]. We present here a corrected version of Theorem 3.1 and Theorem 5.1.

Keywords: fractional differential equation, Riemann–Liouville integral, exponential stability.

2010 Mathematics Subject Classification: 34A08, 34A12, 34D05, 34D20.

“Denote by Ψ(t) the right-hand side of this inequality. Then” (page 7, after the inequality (3.15)) must be replaced by “If Ψ(t) = sup₀≤σ≤t \|x(σ)\|, then”.

“Since the function Ψ(t) is nondecreasing and” (page 7, after the inequality (3.16)) must be replaced by “Since”.

“\(\int_0^t e^{-ρ(t-s)}|T-s|^\Theta\)” must be replaced by “\(\int_0^t e^{-ρ(t-s)}|t-s|^\Theta\)”.

“∀t ∈ [0, T)” in the inequality (3.22) (page 8) must be replaced by “∀t ≥ 0”.

“Since the right-hand side of (3.8) is independent of T this inequality holds for all t ∈ [0, ∞)” (page 8) must be deleted.

“Denote by Φ(t) the right-hand side of the inequality (5.12). Hence if K = (1 − G(A(·), F, f)^{-1}, then from this inequality we have” (page 10, after the inequality (5.12)) must be replaced by “Hence if K = (1 − G(A(·), F, f)^{-1} and Φ(t) = sup₀≤σ≤t \|x(σ)\|, then from the above inequality we have”.

All the results remain true and after the above mentioned corrections in the proofs of Theorem 3.1 and Theorem 5.1 of [1], respectively, these proofs are correct.

²Corresponding author. Email: Milan.Medved@fmph.uniba.sk
References