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Impulsive Fractional equations, analysis of an error

Fractional differential equations with impulses have been studied over the past decades. A methodology often used is to change the problem into an equivalent integral equation in a space of piecewise continuous functions. For the Caputo fractional derivative case an integral equation was proposed by Feckan, Zhou and Wang (Commun. Nonlinear Sci. Numer. Simul., 2012). This paper and it successors have been cited a large number of times. However, it is shown with simple counter-examples that piecewise continuous solutions of the integral equation proposed do not give solutions of the fractional differential equation with an impulse. Moreover, it is proved that no solution of this type is actually possible.