COMPOSITION IDENTITIES FOR THE CAPUTO FRACTIONAL DERIVATIVES AND APPLICATIONS TO OPIAL–TYPE INEQUALITIES

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Abstract. This paper gives improvements of a composition rule for the left-sided and the right-sided Caputo fractional derivatives. As application, improvements of Opial-type inequalities involving the Caputo fractional derivatives are also given.


Keywords and phrases: The Caputo fractional derivatives, composition rules, Opial-type inequalities, the Laplace transform.

REFERENCES