Fractional Integration and Differentiation of Asymptotic Relations and Applications in Fractional Differential Equations

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Abstract

In the first part of the talk, we will discuss how asymptotic relations are preserved under integration and differentiation in the sense of fractional operators. We will examine fractional analogues/extensions of Karamata's integration theorem, the monotone density theorem, the generalized L'Hospital rule, and related results. The second part will be devoted to applications of these techniques in the asymptotic theory of fractional differential equations. Special attention will be devoted to phenomena that have no integer analogue.

References

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