On the Numerical Solution of Linear Fractional Differential Equations

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Abstract

Based on the works [1-4] we propose an iterated collocation technique associated with special graded grids for solving linear Caputo-type fractional differential equations. Global convergence estimates are derived and a superconvergence result for the proposed method is presented. A numerical example confirming the theoretical results is also given.

References

[1] H. Brunner, Volterra Integral Equations: An Introduction to Theory and Applications, Cambridge, 2017.

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