

Numerical solutions of linear differential-algebraic equation systems via Hartley Series

Emrah Unal^a, Numan Yalcin^b, Ercan Celik^c

^aDepartment of Mathematics Education, Artvin Coruh University, Turkey

^bDepartment of Mathematical Engineering, Gumushane University, Turkey

^cDepartment of Mathematics, Atatürk University, Turkey

^aemrah.unal@artvin.edu.tr, ^bnyalcin@gumushane.edu.tr, ^cercelik@atauni.edu.tr

Abstract: In this paper, Hartley series are presented first. Then, the operational matrix of integration together with the product and coefficient matrices are presented. They are used to transform linear differential equation systems to a set of linear algebraic equations. Finally, numerical examples are given.

Keywords: Hartley series, linear differential equation systems, linear differential-algebraic equation systems, approximation.

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