عنوان مقاله:

Conformable Double Sumudu Transform with Applications

نویسندگان:

Suliman Alfaqeih - *Faculty of Science, Department of Mathematics, Ege University, Izmir – TURKEY*

Gizel Bakıcıerler - *Faculty of Science, Department of Mathematics, Ege University, Izmir – TURKEY*

Emine Misirli - *Faculty of Science, Department of Mathematics, Ege University, Izmir – TURKEY*

خلاصه مقاله:

Recently, a new deformation of the Sumudu transforms namely, conformable Sumudu transform has been introduced. In this article, we generalize the concept of one-dimensional conformable Sumudu transform into two-dimensional conformable Sumudu transform namely, conformable double Sumudu transform. Further, we present and prove some main properties and theorems related to the introduced transform. In order to illustrate the validity, efficiency, and applicability of the proposed transform, we apply the conformable double Sumudu transform to solve initial and boundary value problems of conformable fractional partial differential equations.

کلمات کلیدی:

Conformable fractional derivative, Partial differential equation, Telegraph Equation, Mittag-Leffler function, Sumudu transform

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