

Computation of Semi-Analytical Solutions to Fuzzy Non-linear Integral Equations

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May 8, 2020

Abstract

In this article, we use a fuzzy number in its parametric form and transform a non-linear fuzzy integral equations to its parametric form of the second kind as in the crisp case. The main focus is to solve the fuzzy non-linear integral equations for semi analytical solutions. The suggested treatment are presented for the solution of respective fuzzy non-linear integral equations including fuzzy non-linear Fredholm integral equation, fuzzy non-linear Volterra integral equations and fuzzy non-linear singular integral equation of Able's type kernel via an hybrid method of integral transform and decomposition technique. The proposed method is illustrated in details by solving few examples.

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