

A new approach for solution of linear time-delay integral equations via Z-decommission method

ABSTRACT. The main objective of the present research is to provide a new approach for solution of linear time-delay integral equations via Z-decommission method (ZDM). The selected method is applied to solve the equations of Fredholm and Volterra types with time-delay. This study is so important for various fields of sciences, engineering, space and time domain and population dynamics. We applied this approach to some examples of time-delay integral equations. In fact, ZDM is easily applied for obtaining highly accurate (exact) solutions without requiring a large number of computations and complex numerical operations.

Key words: Z-decommission method, linear time-delay integral equations.

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