Maleknejad, K.; Mahmoudi, Y.
Numerical solution of linear Fredholm integral equation by using hybrid Taylor and Block-Pulse functions. (English) Zbl 1038.65147

Summary: We use a combination of Taylor and block-pulse functions on the interval [0, 1], that is called hybrid functions, to estimate the solution of a linear Fredholm integral equation of the second kind. We convert the integral equation to a system of linear equations, and by using numerical examples we show our estimation have a good degree of accuracy.

MSC:
65R20 Numerical methods for integral equations
45B05 Fredholm integral equations

Keywords:
Block-Pulse functions; Fredholm integral equation; Operational matrix; Product operation; Taylor polynomials; numerical examples

Full Text: DOI

References:

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