

A FAST CONVERGING ITERATIVE METHOD FOR VOLTERRA INTEGRAL EQUATIONS OF THE SECOND KIND WITH DELAYED ARGUMENTS

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Abstract. In this paper we apply Mann's iterative algorithm to nonlinear Volterra integral equations of the second kind with delayed argument. This proves the existence and the uniqueness of the solution and gives a better error estimate than the classical Banach Fixed Point Theorem. The paper concludes with a numerical example.

Key Words and Phrases: Volterra nonlinear integral equations, delayed argument, fixed point theorems, Altman's algorithm, Mann's iterative algorithm.

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