عنوان مقاله:

Quasilinearization Numerical Scheme for Solving a Class of Weakly Singular Volterra Integral Equations

نویسنده:

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خلاصه مقاله:

In this paper we propose a fast quasilinearization numerical scheme, coupled with collocation method, for solving nonlinear weakly singular Volterra integral equations. The kernel of the eqaution satisfies some monotonicity conditions. The mothod provides quadratic, uniform and monotone convergence of the quasilinearization method (QLM) for solving nonlinear problems. The convergence of QLM and its rate are examined numerically, on some numerical test examples.

کلمات کلیدی:

Volterra integral equations, Collocation method, Gauss-Kronrod quadrature