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Newton's iteration method with fifth-order convergence for absolute value equation. (Chinese. English summary) [Zbl 07404438]

Summary: Using the smooth approximation function, the absolute value equation is transformed into a smooth nonlinear equation system, and then the fifth-order Newton iterative method is used to solve the equation system. The results indicated that this method is fast in computing speed, and is more effective for solving absolute value equation.

MSC:
65H10 Numerical computation of solutions to systems of equations

Keywords:
smooth approximation function; absolute value equation; nonlinear equation system; Newton’s iteration method