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A numerical approach to $2k + e$ nonlinear equations with only k nonlinear variables. (English)

Zbl 0754.65045

Computing 47, No. 3-4, 367-372 (1992).

The author derives a method for solving $2k + e$ nonlinear algebraic equations in $2k$ unknowns of the form $L(x)y - b = 0$ with unknowns x and y , where e is a positive integer and the entries of the $(2k + e) \times k$ matrix $L(x)$ are nonlinear functions of x . The method is based on solving a linear overdetermined system and a polynomial equation of the k -th order. Some numerical tests are also presented.

Reviewer: [Deng Naiyang \(Beijing\)](#)

MSC:

[65H10](#) Numerical computation of solutions to systems of equations

[65F20](#) Numerical solutions to overdetermined systems, pseudoinverses

Cited in 1 Document

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[nonlinear overdetermined systems](#); [variational equations](#); [Newton's method](#); [nonlinear algebraic equations](#); [linear overdetermined system](#); [numerical tests](#)

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