

Application of Homotopy Perturbation Method with Chebyshev Polynomials to Nonlinear Problems

Changbum Chun

Department of Mathematics, Sungkyunkwan University, Suwon 440-746, Republic of Korea

Reprint requests to C. C.; Fax: +82-31-290-7033; E-mail: cbchun@skku.edu

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In this paper, we present an efficient modification of the homotopy perturbation method by using Chebyshev's polynomials and He's polynomials to solve some nonlinear differential equations. Some illustrative examples are given to demonstrate the efficiency and reliability of the modified homotopy perturbation method.

Key words: Homotopy Perturbation Method; Chebyshev Polynomials; He's Polynomials;
Nonlinear Differential Equations.

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