

Interactive comment on “Assessment of water penetration problem in unsaturated soils” by A. Barari et al.

A. Barari et al.

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Dear Reviewer

The authors would like to convey their appreciation of the respectful reviewer's comments. These comments – once properly addressed - will undoubtedly increase the potential scientific significance of the original manuscript paper. After careful, point by point consideration of the comments, the following text was prepared by the authors, while some changes will be implemented into the originally submitted manuscript in order to address some of the comments implicitly. In final version of the paper, the authors provide more references of HPM and VIM by the other researchers. The authors investigated KDV-Burgers and coupled burger equations with different shapes

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and applications before, but through this paper, we attempt to find analytical solutions of Burger problem with application in geotechnical engineering. The most common approaches used to linearize RE when solving this equation numerically will be cited in final version. Only series solutions require convergence proof, the homotopy perturbation method is an asymptotic method, no convergence proof is needed, see the review article He JH. Some asymptotic methods for strongly nonlinear equations INTERNATIONAL JOURNAL OF MODERN PHYSICS B 20 (10) (2006)1141-1199 He. New interpretation of homotopy perturbation method, INTERNATIONAL JOURNAL OF MODERN PHYSICS B 20(2006)2561-2568. The method always stops before third iteration, though the solution procedure can continue without any difficulty to an infinite series, and the solution converges to the exact solution. Please refer to the following link for a detailed description of the method. <http://sciencewatch.com/inter/aut/2008/08-apr/08aprHe/> To be concluded, only few iterations are needed in the solution procedure, this is the merit over the other existing methods.

Best Regards Amin Barari Department of Civil Engineering Babol University of Technology, Babol, Iran Editor of Research Journal of Appl. Sci. Eng and Tech <http://www.widenetpublication.com/ebj2p.php?jid=RJASET>

Please also note the Supplement to this comment.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 3811, 2009.