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**The variational iteration method for nonlinear oscillators with discontinuities.** (English)

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Summary: He's variational iteration method (VIM) is applied to nonlinear oscillators with discontinuities. We illustrate that the VIM is very effective and convenient and does not require linearization or small perturbation. Contrary to the conventional methods, in VIM, only one iteration leads to high accuracy of the solutions. Moreover, we show that the obtained approximate solutions are valid for the whole solution domain and the approximations are uniformly valid not only for small parameters, but also for very large parameters.

**MSC:**

[65L99](#) Numerical methods for ordinary differential equations

[34C15](#) Nonlinear oscillations and coupled oscillators for ordinary differential equations

[34A45](#) Theoretical approximation of solutions to ordinary differential equations

Cited in **34** Documents

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