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带预测参数的同伦分析方法及其在两个非线性系统中的应用

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Predictor homotopy analysis method and its application to two nonlinear systems

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- 摘要
- 参考文献
- 相关文章

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摘要 在传统同伦分析法(HAM)的基础上,
新方法(PHAM)通过引入一个预测参数及相关条件来预测一个非线性微分系统是否具有多个解,
通过将此方法分别应用到两个非线性微分系统中,
成功地获得了相应系统多个有效的解析近似解.

关键词： 解析近似解 非线性微分系统 带预测参数的同伦分析法(PHAM)

Abstract： Based on traditional homotopy analysis method (HAM), this method (PHAM) introduced a so-called prescribed parameter and associated condition to prove whether a nonlinear differential system admits multiple solutions. The PHAM was applied to two nonlinear differential systems and multiple solutions of associated system were obtained.

Key words： analytic approximate solution nonlinear differential system predictor homotopy analysis method (PHAM)

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