عنوان مقاله:

Optimal homotopy asymptotic and multistage optimal homotopy asymptotic methods for Abel Volterra integral equation of the second kind

محل انتشار:

مجله روشهای محاسباتی برای معادلات دیفرانسیل, دوره 8, شماره 4 (سال: 1399)

تعداد صفحات اصل مقاله: 11

نویسندگان:

Department of Mathematics, Faculty of Sciences, University of Guilan, P.C. ۴۱۹۳۸ Rasht, Iran - - -

Department of Mathematics, Payame Noor University, P. O. Box ۱۹۳۹۵-۳۶۹۷, Tehran, Iran - - - .

خلاصه مقاله:

In this paper, optimal homotopy asymptotic method (OHAM) and multistage optimal homotopy asymptotic (MOHAM) method are applied to find an approximate solution to Abel's integral equation, that is in fact a weakly singular Volterra integral equation. To illustrate these approaches one example is presented. The results confirm the efficiency and ability of these methods to such equations. The results will be compared with the exact solution to find out that which method of these two is more accurate.

کلمات کلیدی:

Abel integral equation, weakly singular Volterra equations, Optimal Homotopy Asymptotic method, multistage optimal homotopy asymptotic method, series solutions

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1597981