



2阶线性非齐次常微分方程的格林函数法

(广西工学院鹿山学院基础教学部,广西 柳州 545006)

Green's Function for a Second-Order Non-Homogeneous Linear Ordinary Differential Equation

(Basic Courses Department Lushan College, Guangxi University of Technology, Liuzhou 545616, Guangxi China)

- 摘要
- 参考文献
- 相关文章

全文: [PDF \(236 KB\)](#) | [HTML \(1 KB\)](#) | 输出: [BibTeX](#) | [EndNote \(RIS\)](#) | [背景资料](#)

摘要 研究了一类2阶非齐线性常微分方程两点边值问题,并给出方程在相同边界条件不同情况下的格林函数和解的唯一性.

关键词: 非齐线性常微分方程 两点边值问题 格林函数 解的唯一性

Abstract: The Green's functions for a second-order non-homogeneous linear ordinary differential equation is studied with the same boundary condition and different cases. The exact expressions of the unique solutions for the non-homogeneous linear boundary problems by the Green's function are given.

Key words: non-homogeneous linear ordinary differential equation two-point boundary value problem Green's function unique solution

基金资助:

广西省自然科学基金项目资助项目(桂科自0991091)

作者简介: 田献珍,女,山西人,广西工学院鹿山学院基础教学部讲师,硕士,主要从事刚性微分方程数值算法研究.

引用本文:

田献珍,霍海峰. 2阶线性非齐次常微分方程的格林函数法[J]. 吉首大学学报自然科学版, 2012, 33(6): 12-14.

TIAN Xian-Zhen, HUO Hai-Feng. Green's Function for a Second-Order Non-Homogeneous Linear Ordinary Differential Equation[J]. Journal of Jishou University (Natural Sciences Edit), 2012, 33(6): 12-14.

[1] 刘明会. 两点边值问题的一种高精度差分方法 [J]. 上海理工大学学报, 2005, 27(1): 68-70.

[2] 马翠, 周先东, 宋丽娟. 2阶线性常微分方程的两点边值问题的新解法 [J]. 西南师范大学学报: 自然科学版, 2010, 35(4): 74-78.

[3] POKOMYI YU V, BOROVSKIKH A V. The Connection of the Green's Function and the Influence Function for Nonclassical Problems [J]. Jour of Mathematical Sciences, 2004, 119(6): 739-768.

[4] WANG Yong-gang, SONG Hui-fang, LI Dan. Solving Two-Point Boundary Value Problem Using Combined Homotopy Perturbation Method and Green's Function Method [J]. Applied Mathematics and Computation, 2009, 212: 366-376.

[5] HA S N, LEE C R. Numerical Study for Two-Point Boundary Value Problem Using Green's Function, Comput. [J]. Math. Appl., 2001, 44: 599-1

[1] 姚庆六. 某些非线性三阶两点边值问题的正解存在性[J]. 吉首大学学报自然科学版, 2003, 24(2): 10-14.

服务

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ E-mail Alert
- ▶ RSS

作者相关文章

- ▶ 田献珍
- ▶ 霍海峰

