



## 一些非光滑 $Li\{e\}nard$ 系统的小扰动极限环

刘霞<sup>1</sup>, 刘艳伟<sup>2</sup>

1. 河南师范大学\数学与信息科学学院, 河南\新乡 453007;
2. 周口师范学院\数学系, 河南\周口 466001

### Small-amplitude limit cycles of some non-smooth $Li\{e\}nard$ systems

LIU Xia<sup>1</sup>, LIU Yan-wei<sup>2</sup>

1. College of Mathematics and Information Science, Henan Normal University, Xinxiang Henan 453007, China;
2. Department of Mathematics, Zhoukou Normal University, Zhoukou Henan 466001, China

- 摘要
- 参考文献
- 相关文章

全文: PDF (198 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 根据韩茂安等所得到的计算非光滑  $Li\{e\}nard$  系统的焦点量的方法, 应用  $maple$  程序, 给出一些较一般的非光滑  $Li\{e\}nard$  系统从原点处分支出的极限环数目.

关键词:  $Li\{e\}nard$  系统 焦点量 环性数

Abstract: Based on the results by HAN Mao-an, et al. for computing some focus values of non-smooth  $Li\{e\}nard$  systems, the number of limit cycles bifurcated from the origin of some more general non-smooth  $Li\{e\}nard$  systems were given by using maple process.

Key words:  $Li\{e\}nard$  systems focus values Hopf cyclicity

收稿日期: 2011-10-01; 出版日期: 2013-01-25

引用本文:

. 一些非光滑  $Li\{e\}nard$  系统的小扰动极限环[J]. 华东师范大学学报(自然科学版), 2013, 2013(1): 47-53.

. Small-amplitude limit cycles of some non-smooth  $Li\{e\}nard$  systems[J]. Journal of East China Normal University(Natural Sc, 2013, 2013(1): 47-53.

[1] {1}

[2] HAN M A, LIU X. Hopf bifurcation for non-smooth  $Li\{e\}nard$  systems[J]. Int J Bifurcation and Chaos, 2009, 19(7): 01-2415.

[3] [4] [5] {2}

[6] TIAN Y, HAN M A. Hopf bifurcation for two types of Liénard systems[J]. J Diff Eqs, 2011, 251: 834-859.

[7] [8] {3}

[9] YANG L, LIU X, XING Y P. Study of limit cycles for some non-smooth Liénard systems[J]. Journal of East China Normal University (Natural Science). 2011, (3): 44-53.

[10] [11]

#### 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

[12] {4}

[13] COLL B, GASULL A, PROHENS R. Limit cycles for non smooth

[14] differential equations via schwarzian derivative[J]. J Diff Eqs,

[15] 96, 132: 203-221.

[1] 杨璐;刘霞;邢业朋. 一类非光滑Lienard系统的极限环研究[J]. 华东师范大学学报(自然科学版), 2011, 2011(3): 44-53.