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时滞脉冲抛物型微分方程解的存在性及其在种群动力学中的应用

赵书芬, 张建元

昭通师范高等专科学校数学系, 昭通 657000

Existence Theorem for Impulsive Parabolic Equations with Delay and Applications to the Population Mod

ZHAO Shufen, ZHANG Jianyuan

Department of Mathematics, Zhaotong Teacher's College, Zhaotong 657000

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摘要 本文研究了一类具有时滞的脉冲抛物型方程在Neumann边值条件下解的存在性问题,利用定义上下解对的方法, 给出了一个新的解的存在性定理和比较原理. 作为例子, 当把这种方法应用到一种群模型中时, 得到了该系统正平衡点全局吸引的新结果.

关键词: 脉冲抛物型方程   时滞   上下解对

Abstract: In this paper, by means of a pair of lower-upper solution, a new existence theorem of solution under Neumann boundary condition for impulsive parabolic equations with delay is obtainied. As an example, when applicated to a population model, sufficient conditions are provided for global attractivity of the equilibrium for this system.

Key words: impulsive parabolic equations   delay   lower-upper solution pair

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