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# 一类二阶离散Hamiltonian系统的同宿解

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## Homoclinic solutions for a class of the second order discrete Hamiltonian systems

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摘要  研究了一类二阶离散Hamiltonian系统的非平凡同宿解的存在性.首先构造与原系统相关的一列周期系统;然后在一定条件下利用山路定理得到这些系统的非平凡$2kT$-周期解;最后通过极限得到原系统的非平凡同宿解.

关键词： 同宿解    离散Hamiltonian系统    临界点

Abstract： We study the existence of nontrivial homoclinic solution for the second order discrete Hamiltonian system.At first,one sequence of periodic systems is constructed with the original system.Then,under certain conditions,nontrivial $2kT$-periodic solutions of these systems are got by mountain theorem.Finally,a homoclinic solution is obtained as a limit of these $2kT$-periodic solutions.

Key words： homoclinic solutions    discrete Hamiltonian systems    critical point

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