

论文

## A HOMOCLINIC ORBIT FOR LAGRANGIAN SYSTEMS

WU Shaoping

Department of Mathematics, Zhejiang University, Hangzhou 310027, China

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**摘要** We prove the existence of a homoclinic orbit for Lagrangian system (LS) where the Lagrangian  $L(t,x,y)=1/2 \sum a_{ij}(x)y_{iy_j}-V(t,x)$ . A similar argument to Rabinowitz[5] is used, where  $a_{ij}(x)$  is an identity matrix. Now the differential equation is quasilinear and more estimates are needed to get the uniform bound for the second derivative of periodic sequence  $\{x_k(t)\}$  with period  $2kT$ .

**关键词** [Homoclinic orbit](#), [Lagrangian system](#), [Mou](#)

分类号

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**Key words** [Homoclinic orbit](#) [Lagrangian system](#) [Mountain Pass Lemma](#)

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