

论文

非线性Sobolev Galpern方程的近似惯性流形

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摘要:

近似惯性流形概念与耗散偏微分方程的长时间行为研究有关, 该文对非线性Sobolev Galpern方程构造了两个近似惯性流形. 证明了非平滑近似惯性流形 Σ 和平滑近似惯性流形 $\Sigma_0=P_mH$ 对整体吸引子有相同的逼近阶数.

关键词: 非线性Sobolev Galpern方程 长时间行为 近似惯性流形

分类号:

35B40; 35Q55

Approximate Inertial Manifolds for the Nonlinear Sobolev Galpern Equations

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Abstract:

The concept of approximate inertial manifold is related to the study of the long time behavior of dissipative partial differential equations. In the present paper, the authors construct two approximate inertial manifolds for the nonlinear Sobolev Galpern equations. The authors show that the non flat approximate inertial manifold Σ and the flat approximate inertial manifold $\Sigma_0=P_mH$ have the same order of approximation to the global attractor.

Keywords: Nonlinear Sobolev Galpern equations Long time behavior Approximate inertial manifolds.

收稿日期 修回日期 网络版发布日期

DOI:

基金项目:

国家自然科学基金(10271034)资助

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