

论文

MODELLING AND STABILITY ANALYSIS OF POPULATION GROWTH WITH SPATIAL DIFFUSION

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摘要 In recent years, population growth models with spatial diffusion have been extensively studied by many authors (for example, see [1-5]). In this paper, a population growth model is considered with a discrete age-dependence and spatial diffusion, and is investigated in a semigroup framework. The spectral properties of the population operator are given. On the basis of such spectral consideration, the asymptotic behaviour of the semigroup generated by the population operator is obtained. Finally, a nonlinear population growth model is considered and its stability is analyzed.

关键词 [Discrete age-dependent population model.](#)

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Key words [Discrete age-dependent population model](#) [spatial diffusion](#) [stability analysis](#)

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