

研究、探讨

一种基于生物激素调节机理的优化遗传算法

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摘要 针对标准遗传算法存在着早熟、进化缓慢等不足, 基于生物激素调节规律, 提出一种改进型的自适应遗传算法。该遗传算法能够充分发挥优良个体的作用, 保证种群的高度多样性和优良性, 从而提高进化速度和避免早熟现象。最后的仿真结果表明, 在相同环境下, 改进后的遗传算法比标准算法具有较好的寻优搜索精度和较快的收敛速度。

关键词 [遗传算法](#) [生物激素](#) [自适应](#)

分类号 [TP301.6](#)

Optimized Genetic Algorithm based on adjustment mechanism of biologic incretion

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Abstract

In this paper, a self-adaptive genetic algorithm based on the adjustment mechanism of biological incretion is proposed to resolve the issues existing in standard genetic algorithm, such as early mature and slow evolution. This algorithm can full play the role of individual had fine quality, ensure high degree of population diversity and quality, so as to enhance the speed of evolution and avoid the premature. The simulation results have shown that the proposed genetic algorithm has good accuracy of finding optimization method and rapid convergence rate.

Key words [Genetic Algorithm](#) [biologic incretion](#) [Self-Adaptive](#)

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