

INFORMATIONAL ANALYSIS OF THE GENETIC SEARCH

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Abstract

The GAs are multi-dimensional and stochastic search methods involving complex interactions among their parameters such as population size, choice of GA operators, operator probabilities, representation of decision variables. The GA search operators need to be ever-more informed to maintain tractable search. The informative operator here is inductive generalization, which is necessary for the acquisition of so-called 'strong' methods. The research reported in the paper aims to provide new insights in the analysis of the GA-search using Markov modeling coupled with concepts and tools of classical information theory.

Keywords: *genetic algorithm, Markov modelling, probabilistic information theory*