

[Davis, Lawrence \(ed.\)](#)

Genetic algorithms and simulated annealing. (English) [Zbl 0684.68013](#)

Research Notes in Artificial Intelligence. London: Pitman Publishing; Los Altos, CA: Morgan Kaufmann Publ., Inc. 216 p. £17.95 (1987).

[The articles of this volume will not be indexed individually.]

Genetic algorithms and Simulated annealing collects a group of papers on these stochastic search techniques. The articles are concerned with two ideas: mapping a given problem domain to one of the search techniques, and implementation of the search. Most of the papers are a mixture of the two. The book is probably most useful as a collection of examples of the state of the art (as of late 1986).

Specific practical problem domains treated include: keyboard configuration for Asian languages [paper 2], optimization of strategies for the repeated Prisoner's dilemma [3], parsing [11], and pattern matching [12].

Among the implementation variations explored are: alternative initialization, mutation, and recombination operators [2, 5, 7, 13], exploitation of parallelism [7, 10], incorporation of problem-specific knowledge in the algorithm [2, 4], and multi-stage (hierarchical) systems [8, 9]. Finally, two papers are primarily concerned with measuring the performance of alternative algorithms [6, 13].

Reviewer: [St.Turnbull](#)

MSC:

[68-06](#) Proceedings, conferences, collections, etc. pertaining to computer science
[68T99](#) Artificial intelligence

Cited in **55** Documents

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[Genetic algorithms](#); [Simulated annealing](#); [stochastic search](#)