

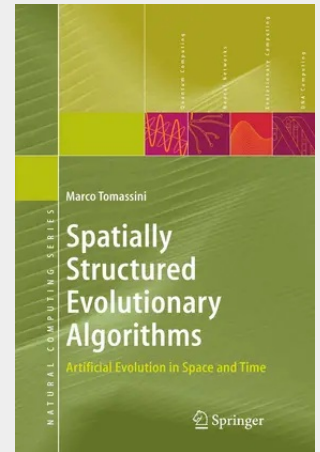
Spatially Structured Evolutionary Algorithms

Artificial Evolution in Space and Time

Evolutionary algorithms (EAs) is now a mature problem-solving family of heuristics that has found its way into many important real-life problems and into leading-edge scientific research. Spatially structured EAs have different properties than standard, mixing EAs. By virtue of the structured disposition of the population members they bring about new dynamical features that can be harnessed to solve difficult problems faster and more efficiently. This book describes the state of the art in spatially structured EAs by using graph concepts as a unifying theme. The models, their analysis, and their empirical behavior are presented in detail. Moreover, there is new material on non-standard networked population structures such as small-world networks.

The book should be of interest to advanced undergraduate and graduate students working in evolutionary computation, machine learning, and optimization. It should also be useful to researchers and professionals working in fields where the topological structures of populations and their evolution plays a role.

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