

Artificial Life

How to Create a Life Computationally

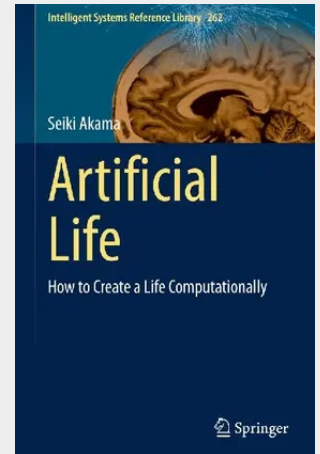
This book provides some resources of Artificial Life. Artificial Life (ALife or A-Life) is the research area which simulates a life computationally. It involves several approaches to living systems in artificial manners. It was recognized as a scientific field in the 1980's. Artificial Life is related to many scientific fields including biology and computer science, and its history is old. In fact, the earlier works have been done by people like Turing and von Neumann.

Fields like that neural networks, evolutionary computation, and cellular automaton constitute the foundations for Artificial Life. The so-called wet ware is an approach in more biology-oriented, which is known that there are some Artificial Life Systems at present. It is expected to see further progresses of this exciting field.

The materials include: history, philosophy, related areas, recent developments, etc. Starting from the overview, the authors give an exposition of basic subjects like cellular automaton, neural networks, evolutionary computation, and wet ware. The authors also introduce some examples of Artificial Life Systems like Boids, Tierra, and Open Warm.

The book is intended for those, like experts and students, who wish to get involved in the field as a monograph or a textbook for the subject. It is also useful for beginners. But, the authors assume that the reader has mastered the material ordinarily covered in AI and mathematics.

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