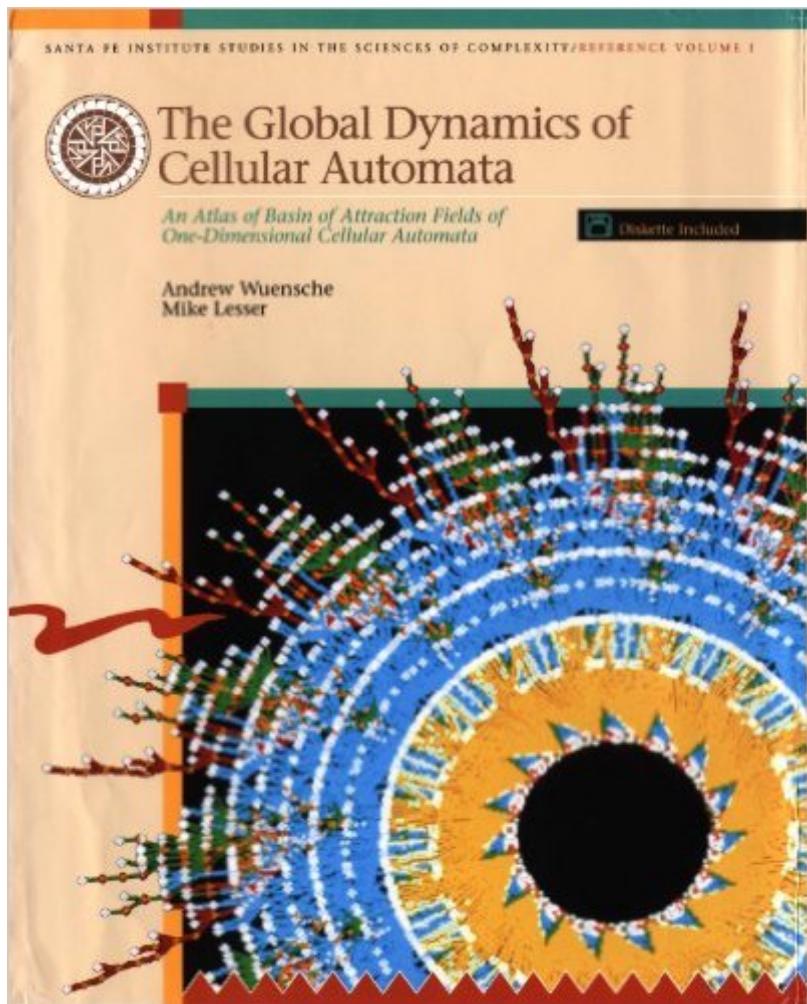


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# The Global Dynamics Of Cellular Automata: An Atlas Of Basin Of Attraction Fields Of One-Dimensional Cellular Automata (Santa Fe Institute Studies In The Sciences Of Complexity Reference Volumes)





## **Synopsis**

The book introduces a powerful new global perspective for the study of discrete dynamical systems. After first looking at the unique trajectory of a system's future, an algorithm is also presented that directly computes the multiple merging trajectories that may have constituted the system's past. A given set of cellular parameters will, in a sense, crystallize state space into a set of basins of attraction that will typically have the topology of branching trees rooted on attractor cycles. The book makes accessible the explicit portraits of these mathematical objects through computer-generated graphics. (Book/disk package disk requires an 80286, or higher, IBM PC or compatible with 640K of memory, VGA graphics, and DOS 2.0 or higher.

## **Book Information**

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## **Customer Reviews**

Cellular automata are a fascinating field, and this book summarises some research done on them in the early 90s. The dynamics are described. There are different types of behaviour depending on the given choices of CA. Typically, a specific CA has some parameters, which are then tweaked to scrutinise the CA. There are many black and white and colour images. The latter are sometimes quite pretty. But even the black and white images often show interesting structures. The code referred to by the book ran on computers that are now obsolete. So too is the floppy [who uses these anymore?] that accompanies the book. But a diligent reader should be able to reproduce and recompile the code for newer machines.

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