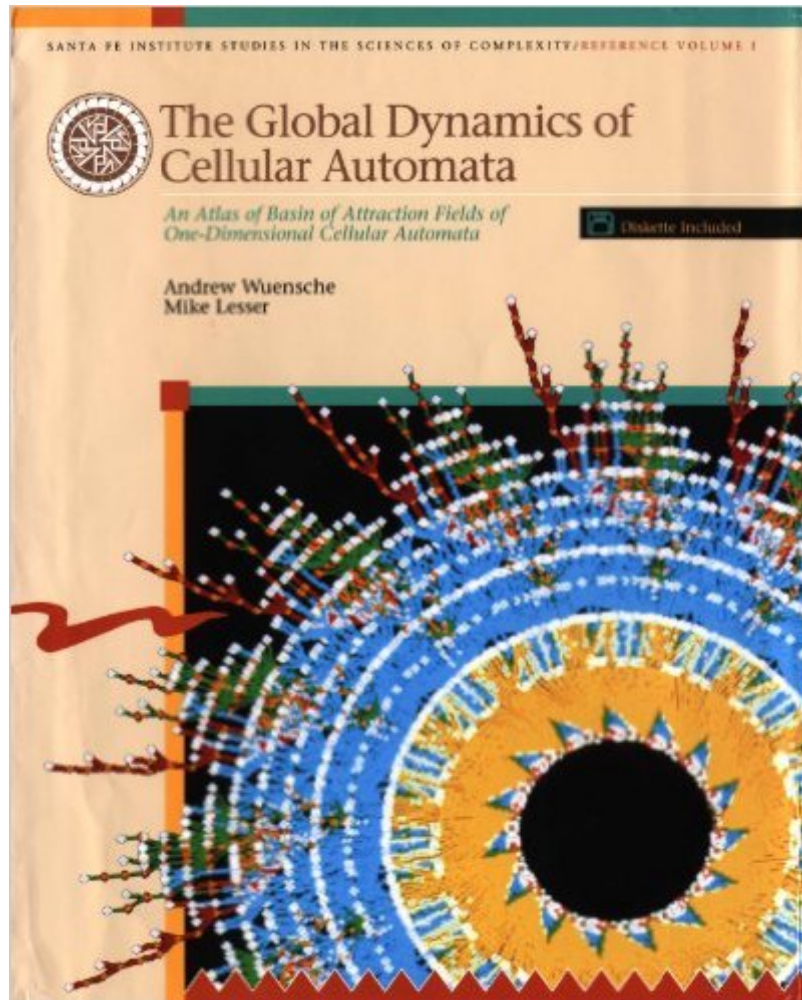The book was found

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)

SANTA FE INSTITUTE STUDIES IN THE SCIENCES OF COMPLEXITY/REFERENCE VOLUME I

The Global Dynamics of Cellular Automata

An Atlas of Basin of Attraction Fields of One-Dimensional Cellular Automata

Diskette Included

Andrew Wuensche
Mike Lesser

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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Average Customer Review: 4.0 out of 5 stars Â See all reviewsÂ (1 customer review)

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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.

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) Cellular Automata: 8th International Conference on Cellular Automata for Research and Industry, ACRI 2008, Yokohama, Japan, September 23-26, 2008, Proceedings (Lecture Notes in Computer Science) Cellular and Molecular Immunology, 8e (Cellular and Molecular Immunology, Abbas) Color Atlas and Synopsis of Clinical Ophthalmology -- Wills Eye Institute -- Glaucoma (Wills Eye Institute Atlas Series) Color Atlas and Synopsis of Clinical Ophthalmology -- Wills Eye Institute -- Retina (Wills Eye Institute Atlas Series) Color Atlas and Synopsis of Clinical Ophthalmology -- Wills Eye Institute -- Neuro-Ophthalmology (Wills Eye Institute Atlas Series) Simply Complexity: A Clear Guide to Complexity Theory Shaping Space: The Dynamics of Three-Dimensional Design Mrs. Fields Cookie Book: 100 Recipes from the Kitchen of Mrs. Fields Santa Muerte Rituals: Santa Muerte Prayers and Rituals Mountain Biking Santa Cruz, 2nd Edition: The Ultimate Trail & Ride Guide for the Santa Cruz Area Applications of Finite Fields (Institute of Mathematics and its Applications Conference Series, New Series) Reference World Atlas, 10th Edition (Dk Reference World Atlas) Dynamics AX Performance Optimization Guide: Fixing Troubles with Microsoft Dynamics AX and SQL Server Nonlinear Oscillations, Dynamical Systems, and Bifurcations of Vector Fields (Applied Mathematical Sciences) Expulsions: Brutality and Complexity in the Global Economy The Course of Recognition (Institute for Human Sciences Vienna Lecture Series) Dimensional Bead Embroidery: A Reference Guide to Techniques (Lark Jewelry & Beading) Microsoft Project 2016 Quick Reference Guide Managing Complexity - Windows Version (Cheat Sheet of Instructions, Tips & Shortcuts - Laminated Card) Microsoft Project 2013 Quick Reference Guide: Managing Complexity (Cheat Sheet of Instructions, Tips & Shortcuts - Laminated Card)