

1. Record Nr.	UNINA9910783680103321
Titolo	Cellular computing / / edited by Martyn Amos
Pubbl/distr/stampa	Oxford, [England] : , : Oxford University Press, , 2004 ©2004
ISBN	0-19-756194-2 0-19-028868-X 1-280-50235-5 1-4237-2021-0 0-19-803537-3 1-4337-0098-0
Descrizione fisica	1 online resource (239 p.)
Collana	Series in Systems Biology
Disciplina	571.6
Soggetti	Bioinformatics Cellular automata Molecular computers Nanotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previously issued in print: 2004.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Contents; Contributors; 1 An Introduction to Cellular Computing; 2 Proteins and Information Processing; 3 Enzyme Genetic Programming; 4 Genetic Process Engineering; 5 The Device Science of Whole Cells as Components in Microscale and Nanoscale Systems; 6 The Enterococcus faecalis Information Gate; 7 Cellular Computation and Communication Using Engineered Genetic Regulatory Networks; 8 The Biology of Integration of Cells into Microscale and Nanoscale Systems; 9 Encrypted Genes and Their Assembly in Ciliates; 10 Biocomputation in Ciliates; Index; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; Q; R ST; U; V; W; X
Sommario/riassunto	The completion of the first draft of the human genome has led to an explosion of interest in genetics and molecular biology. The view of the genome as a network of interacting computational components is well-

established, but researchers are now trying to reverse the analogy, by using living organisms to construct logic circuits. The potential applications for such technologies is huge, ranging from bio-sensors, through industrial applications to drug delivery and diagnostics. This book deals with the implementation of this technology, describing several working experimental demonstrations using cells as components of logic circuits, building toward computers incorporating biological components in their functioning.
