1. Record Nr.	UNISA996465407303316
Titolo	Algebraic Biology [[electronic resource]] : Third International Conference, AB 2008, Castle of Hagenberg, Austria, July 31-August 2, 2008, Proceedings / / edited by Katsuhisa Horimoto, Georg Regensburger, Markus Rosenkranz, Hiroshi Yoshida
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2008
ISBN	3-540-85101-1
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (XII, 245 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5147
Classificazione	570 BIO 110f SS 4800
Disciplina	570.151
Soggetti	Computer science Machine theory Computer science—Mathematics Bioinformatics Software engineering Computer Science Logic and Foundations of Programming Formal Languages and Automata Theory Symbolic and Algebraic Manipulation Computational and Systems Biology Software Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Algorithms for Inference, Analysis and Control of Boolean Networks -- Tutorial on Model Checking: Modelling and Verification in Computer Science -- Differential Algebra and System Modeling in Cellular Biology -- Hybrid Semantics for Stochastic ?-Calculus -- Applying a Rigorous Quasi-Steady State Approximation Method for Proving the Absence of Oscillations in Models of Genetic Circuits -- On the Computational Power of Biochemistry -- The Geometry of the Neighbor-Joining Algorithm for Small Trees -- Neural Algebra and Consciousness: A

Theory of Structural Functionality in Neural Nets -- An Algorithm for Qualitative Simulation of Gene Regulatory Networks with Steep Sigmoidal Response Functions -- Property Preservation along Embedding of Biological Regulatory Networks -- Process Algebra Models of Population Dynamics -- Algebraic Analysis of Bifurcation and Limit Cycles for Biological Systems -- The Smallest Multistationary Mass-Preserving Chemical Reaction Network -- Local Structure and Behavior of Boolean Bioregulatory Networks -- Investigating Generic Methods to Solve Hopf Bifurcation Problems in Algebraic Biology -- An Improved Algorithm for Detecting a Singleton Attractor in a Boolean Network Consisting of AND/OR Nodes -- Constructing a Knowledge Base for Gene Regulatory Dynamics by Formal Concept Analysis Methods.

Sommario/riassunto	This book constitutes the refereed proceedings of the Third International Conference on Algebraic Biology, AB 2008, held at the Castle of Hagenberg, Austria in July 2008 as part of the RISC Summer 2008, organized by the Research Institute for Symbolic Computation. The 14 revised full papers presented together with 3 tutorial lectures were carefully reviewed and selected from 27 submissions. The conference is the interdisciplinary forum for the presentation of research on all aspects of applications of symbolic computation (computer algebra, computational logic, and related methods) to various issues in biology and life sciences as well as other problems in biology being approached with symbolic methods.