

1. Record Nr.	UNISA996466116603316
Titolo	Computational Methods in Systems Biology [[electronic resource]] : 6th International Conference CMSB 2008, Rostock, Germany, October 12-15, 2008. Proceedings / / edited by Monika Heiner, Adelinde M. Uhrmacher
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2008
ISBN	1-283-43790-2 9786613437907 3-540-88562-5
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (X, 403 p.)
Collana	Lecture Notes in Bioinformatics ; ; 5307
Disciplina	570
Soggetti	Life sciences Computer simulation Software engineering Bioinformatics Bioinformatics Computational biology Life Sciences, general Simulation and Modeling Software Engineering/Programming and Operating Systems Computational Biology/Bioinformatics Computer Appl. in Life Sciences Software Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Qualitative Modeling and Simulation of Bacterial Regulatory Networks -- Integrated Analysis from Abstract Stochastic Process Algebra Models -- An Exact Brownian Dynamics Method for Cell Simulation -- Multiscale Modelling of Neuronal Signalling -- Systems Biology of Halophilic Archaea -- A Partial Granger Causality Approach to Explore Causal Networks Derived From Multi-parameter Data -- Functional

Evolution of Ribozyme-Catalyzed Metabolisms in a Graph-Based Toy-
Universe -- Component-Based Modelling of RNA Structure Folding -- A
Language for Biochemical Systems -- The Attributed Pi Calculus -- The
Continuous π -Calculus: A Process Algebra for Biochemical Modelling --
Automatic Complexity Analysis and Model Reduction of Nonlinear
Biochemical Systems -- Formal Analysis of Abnormal Excitation in
Cardiac Tissue -- The Distribution of Mutational Effects on Fitness in a
Simple Circadian Clock -- SED-ML – An XML Format for the
Implementation of the MIASE Guidelines -- On Parallel Stochastic
Simulation of Diffusive Systems -- Large-Scale Design Space
Exploration of SSA -- Statistical Model Checking in BioLab: Applications
to the Automated Analysis of T-Cell Receptor Signaling Pathway -- On
a Continuous Degree of Satisfaction of Temporal Logic Formulae with
Applications to Systems Biology -- A Model Checking Approach to the
Parameter Estimation of Biochemical Pathways -- Compositional
Definitions of Minimal Flows in Petri Nets -- On Inner and Outer
Descriptions of the Steady-State Flux Cone of a Metabolic Network -- A
Combinatorial Approach to Reconstruct Petri Nets from Experimental
Data -- An Exact Brownian Dynamics Method for Cell Simulation --
Stochastic Analysis of Amino Acid Substitution in Protein Synthesis -- A
Stochastic Single Cell Based Model of BrdU Measured Hematopoietic
Stem Cell Kinetics -- Erratum: Analyzing a Discrete Model of Aplysia
Central Pattern Generator.

Sommario/riassunto

This book constitutes the refereed proceedings of the 6th International
Conference on Computational Methods in Systems Biology, CMSB 2008,
held in Rostock, Germany, in September 2008. The 21 revised full
papers presented together with the summaries of 5 invited papers were
carefully reviewed and selected from more than 60 submissions. The
papers cover theoretical or applied contributions that are motivated by
a biological question focusing on modeling approaches, including
process algebra, simulation approaches, analysis methods, in particular
model checking and flux analysis, and case studies.
