

1. Record Nr.	UNISA996465732503316
Titolo	Computational Methods in Systems Biology [[electronic resource] ] : 7th International Conference, CMSB 2009 / / edited by Pierpaolo Degano, Roberto Gorrieri
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009
ISBN	3-642-03845-X
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (X, 329 p.)
Collana	Lecture Notes in Bioinformatics ; ; 5688
Classificazione	BIO 110f SS 4800
Disciplina	570
Soggetti	Life sciences Computers Bioinformatics Computer simulation Numerical analysis Life Sciences, general Theory of Computation Computational Biology/Bioinformatics Simulation and Modeling Computation by Abstract Devices Numeric Computing Bologna (2009) Kongress.
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	Prediction of Protein-Protein Interacting Sites: How to Bridge Molecular Events to Large Scale Protein Interaction Networks -- The Equivalence between Biology and Computation -- BlenX4Bio – BlenX for Biologists -- Modelling Biological Clocks with Bio-PEPA: Stochasticity and Robustness for the Neurospora crassa Circadian Network -- Quantitative Pathway Logic for Computational Biology -- A Prize-Collecting Steiner Tree Approach for Transduction Network Inference

-- Formal Analysis of the Genetic Toggle -- Control Strategies for the Regulation of the Eukaryotic Heat Shock Response -- Computing Reachable States for Nonlinear Biological Models -- On Coupling Models Using Model-Checking: Effects of Irinotecan Injections on the Mammalian Cell Cycle -- The  $\omega$ -Lattice: Decidability Boundaries for Qualitative Analysis in Biological Languages -- Approximation of Event Probabilities in Noisy Cellular Processes -- Equivalence and Discretisation in Bio-PEPA -- Improved Parameter Estimation for Completely Observed Ordinary Differential Equations with Application to Biological Systems -- A Bayesian Approach to Model Checking Biological Systems -- Dynamic Compartments in the Imperative  $\omega$ -Calculus -- Probabilistic Approximations of Signaling Pathway Dynamics -- A Reduction of Logical Regulatory Graphs Preserving Essential Dynamical Properties -- On the Use of Stochastic Petri Nets in the Analysis of Signal Transduction Pathways for Angiogenesis Process -- CSL Model Checking of Biochemical Networks with Interval Decision Diagrams -- Qualitative Transition Systems for the Abstraction and Comparison of Transient Behavior in Parametrized Dynamic Models.

Sommario/riassunto

This book constitutes the refereed proceedings of the 7th International Conference on Computational Methods in Systems Biology, CMSB 2009, held in Bologna, Italy, August 31 - September 1, 2009. The 18 revised full papers presented together with the summaries of 3 invited papers were carefully reviewed and selected from more than 45 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.