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Nota di contenuto	'IN SILICO' SIMULATION OF BIOLOGICAL PROCESSES; Contents; Participants; Chair's introduction; Integrative biological modelling in silico; Discussion; Advances in computing, and their impact on scientific computing; Discussion; From physics to phenomenology. Levels of description and levels of selection; Making sense of complex phenomena in biology; Discussion; On ontologies for biologists: the Gene Ontology-untangling the web; Discussion; General discussion I; Model validation; The KEGG database; Discussion; Bioinformatics of cellular signalling; Discussion; General discussion II Standards of communicationSemantics and intercommunicability; Imaging-based integrative models of the heart: closing the loop between experiment and simulation; Discussion; General discussion III; Modelling Ca(2+) signalling; The Virtual Cell project; Discussion; Modelling the bacterial chemotaxis receptor complex; The heart cell in

	silico: successes, failures and prospects; Discussion; Discussion; General discussion IV; The IUPS Physiome Project; Discussion; Using in silico biology to facilitate drug development; Discussion; Final discussion; Is there a theoretical biology? Index of contributorsSubject index
Sommario/riassunto	Over recent decades vast amounts of biological data have been accumulated. However, it is becoming increasingly difficult to apply traditional theoretical methods to the formulation of coherent pictures of cell and organ function because it is no longer possible for a human theorist to integrate all of the available information. Instead, computer technologies must now be used to perform this integration. This book brings together contributions from many different fields to summarize the current status of computer-assisted modelling of biological processes. The initial chapters deal with fund