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| Altri autori (Persone)  | MasulliF (Francesco)<br>PetersonLeif E<br>TagliaferriRoberto  |
| Disciplina              | 570   |
| Soggetti                | Life sciences<br>Computer science<br>Algorithms<br>Pattern recognition systems<br>Database management<br>Artificial intelligence<br>Life Sciences<br>Theory of Computation<br>Automated Pattern Recognition<br>Database Management<br>Artificial Intelligence   |
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| 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       | Tools for Bioinformatics -- The ImmunoGrid Simulator: How to Use It -- Improving Coiled-Coil Prediction with Evolutionary Information -- Intelligent Text Processing Techniques for Textual-Profile Gene Characterization -- SILACAnalyzer - A Tool for Differential Quantitation of Stable Isotope Derived Data -- Gene Expression Analysis -- Non-parametric MANOVA Methods for Detecting Differentially Expressed Genes in Real-Time RT-PCR Experiments -- In Silico Screening for |

Pathogenesis Related-2 Gene Candidates in *Vigna Unguiculata*  
 Transcriptome -- Penalized Principal Component Analysis of Microarray  
 Data -- An Information Theoretic Approach to Reverse Engineering of  
 Regulatory Gene Networks from Time–Course Data -- New Perspectives  
 in Bioinformatics -- On the Use of Temporal Formal Logic to Model  
 Gene Regulatory Networks -- Predicting Protein-Protein Interactions  
 with K-Nearest Neighbors Classification Algorithm -- Simulations of  
 the EGFR - KRAS - MAPK Signalling Network in Colon Cancer. Virtual  
 Mutations and Virtual Treatments with Inhibitors Have More Important  
 Effects Than a 10 Times Range of Normal Parameters and Rates  
 Fluctuations -- Special Session on “Using Game-Theoretical Tools in  
 Bioinformatics” -- Basics of Game Theory for Bioinformatics --  
 Microarray Data Analysis via Weighted Indices and Weighted Majority  
 Games -- Special Session on “Combining Bayesian and Machine  
 Learning Approaches in Bioinformatics: State of Art and Future  
 Perspectives” -- Combining Replicates and Nearby Species Data: A  
 Bayesian Approach -- Multiple Sequence Alignment with Genetic  
 Algorithms -- Special Session on “Data Clustering and Bioinformatics”  
 (DCB 2009) -- Multiple Clustering Solutions Analysis through Least-  
 Squares Consensus Algorithms -- Projection Based Clustering of Gene  
 Expression Data.-Searching a Multivariate Partition Space Using MAX-  
 SAT -- A Novel Approach for Biclustering Gene Expression Data Using  
 Modular Singular Value Decomposition -- Special Session on  
 “Intelligent Systems for Medical Decisions Support” (ISMDS 2009) --  
 Using Computational Intelligence to Develop Intelligent Clinical  
 Decision Support Systems -- Different Methodologies for Patient  
 Stratification Using Survival Data -- 3-D Mouse Brain Model  
 Reconstruction from a Sequence of 2-D Slices in Application to Allen  
 Brain Atlas -- A Proposed Knowledge Based Approach for Solving  
 Proteomics Issues.

## Sommario/riassunto

This volume contains a selection of the best contributions delivered at the 6<sup>th</sup> International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics (CIBB 2009) held at Oratorio San Filippo Neri in Genoa (Italy) during October 15-17, 2009.

The CIBB meeting series is organized by the Special Interest Group on Bioinformatics of the International Neural Network Society (INNS) to provide a forum open to researchers from different disciplines to present and discuss problems concerning computational techniques in bioinformatics, systems biology and medical informatics with a particular focus on neural networks, machine learning, fuzzy logic, and evolutionary computational methods. From 2004 to 2007, CIBB meetings were held with an increasing number of participants in the format of a special session of bigger conferences, namely, WIRN 2004 in Perugia, WILF 2005 in Crema, FLINS 2006 in Genoa and WILF 2007 in Camogli. With the great success of the special session at WILF 2007 that included 26 strongly rated papers, we launched the first autonomous CIBB conference edition starting with the 2008 conference in Vietri.

CIBB 2009 attracted 57 paper submissions from all over the world. A rigorous peer-review selection process was applied to ultimately select the papers included in the program of the conference. This volume collects the best contributions presented at the conference. Moreover, the volume also includes one presentation from keynote speakers and two tutorial presentations. The success of CIBB 2009 is to be credited to the contribution of many people. Firstly, we would like to thank the organizers of the special sessions for attracting so many good papers

which extended the focus of the main topics of CIBB. Second, special thanks are due to the Program Committee members and reviewers for providing high-quality reviews.

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