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Soggetti	Artificial intelligence Database management Medicine Information storage and retrieval Computer science—Mathematics Pattern recognition Artificial Intelligence Database Management Medicine/Public Health, general Information Storage and Retrieval Mathematics of Computing Pattern Recognition
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Nota di contenuto	Keynote Lectures -- Medical Decision Support Systems -- Medical Bayes Networks -- Synchronization Analysis of Bivariate Time Series and Its Application to Medical Data -- A Survey of Data Mining Techniques -- Time Series Analysis -- Prognoses for Multiparametric Time Courses -- Estimation of the Time Delay of Epileptic Spikes by ICA -- Change-Point Detection in Kinetic Signals -- Hierarchical Clustering of Functional MRI Time-Series by Deterministic Annealing -- Classification of Electro-encephalographic Spatial Patterns -- Detection and Classification of Sleep-Disordered Breathing Using Acoustic

Respiratory Input Impedance and Nasal Pressure -- Some Statistical Methods in Intensive Care Online Monitoring — A Review -- Entropy Measures in Heart Rate Variability Data -- Determinism and Nonlinearity of the Heart Rhythm -- Bayes Networks -- Feature Subset Selection Using Probabilistic Tree Structures. A Case Study in the Survival of Cirrhotic Patients Treated with TIPS -- Deconvolution and Credible Intervals using Markov Chain Monte Carlo Method -- Graphical Explanation in Bayesian Networks -- Neural Nets -- About the Analysis of Septic Shock Patient Data -- Data Mining and Knowledge Discovery in Medical Applications Using Self-Organizing Maps -- Analysis of Nonlinear Differential Equations: Parameter Estimation and Model Selection -- Machine Learning -- Medical Expert Evaluation of Machine Learning Results for a Coronary Heart Disease Database -- Combining Methodical Procedures from Knowledge Discovery in Databases and Individual-Oriented Simulation -- Incosistency Tests for Patient Records in a Coronary Heart Disease Database -- Architectures for Data Aquisition and Data Analysis -- A MATLAB-Based Software Tool for Changepoint Detection and Nonlinear Regression in Dose-Response Relationships -- A Web-Based Electronic Patient Record System as a Means for Collection of Clinical Data -- The InterAction Database: Synergy of Science and Practice in Pharmacy -- Medical Informatics and Modeling -- A New Computerized Method to Verify and Disseminate Medical Appropriateness Criteria -- Pharmacokinetic & -dynamic Drug Information and Dosage Adjustment System Pharmdis -- Discrete Simulations of Cadaver Kidney Allocation Schemes -- Bootstrap and Cross-Validation to Assess Complexity of Data-Driven Regression Models -- Genetic and Fuzzy Algorithms -- Genetic Programming Optimisation of Nuclear Magnetic Resonance Pulse Shapes -- Application of a Genetic Programming Based Rule Discovery System to Recurring Miscarriage Data -- Detecting of Fatigue States of a Car Driver -- Operator Method of Fuzzification -- Medical Data Mining -- A System for Monitoring Nosocomial Infections -- A Data Mining Alternative to Model Hospital Operations: Filtering, Adaption and Behaviour Prediction -- Selection of Informative Genes in Gene Expression Based Diagnosis: A Nonparametric Approach -- Principal Component Analysis for Descriptive Epidemiology.

Sommario/riassunto

It is a pleasure for us to present the contributions of the First International Symposium on Medical Data Analysis. Traditionally, the eld of medical data analysis can be devided into classical topics such as medical statistics, sur- val analysis, biometrics and medical informatics. Recently, however, time series analysis by physicists, machine learning and data mining with methods such as neural networks, Bayes networks or fuzzy computing by computer scientists have contributed important ideas to the led of medical data analysis. Although all these groups have similar intentions, there was nearly no exchange or discussion between them. With the growing possibilities for storing and ana- zing patient data, even in smaller health care institutions, the need for a rational treatment of all these data emerged as well. Therefore, the need for data exchange and presentation systems grew also. The goal of the symposium is to collect all these relevant aspects together. It provides an international forum for the sharing and exchange of original re- arch results, ideas and practical experiences among researchers and application developers from di erent areas related to medical applications dealing with the analysis of medical data. After a thorough reviewing process, 33 high quality papers were selected from the 45 international submissions. These contributions provided the di erent - pects of the eld in order to represent us with an exciting program.