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Nota di contenuto	Agent-Based Systems -- A Human-Machine Cooperative Approach for Time Series Data Interpretation -- MRF Agent Based Segmentation: Application to MRI Brain Scans -- R-CAST-MED: Applying Intelligent Agents to Support Emergency Medical Decision-Making Teams -- Knowledge-Based Modeling and Simulation of Diseases with Highly Differentiated Clinical Manifestations -- Co-operative Agents in Analysis and Interpretation of Intracerebral EEG Activity: Application to Epilepsy -- An Ontology-Driven Agent-Based Clinical Guideline

Execution Engine -- Temporal Data Mining -- An Intelligent Aide for Interpreting a Patient's Dialysis Data Set -- Temporal Data Mining with Temporal Constraints -- A Nearest Neighbor Approach to Predicting Survival Time with an Application in Chronic Respiratory Disease -- Using Temporal Context-Specific Independence Information in the Exploratory Analysis of Disease Processes -- Discovery and Integration of Organ-Failure Episodes in Mortality Prediction -- Machine Learning and Knowledge Discovery -- Contrast Set Mining for Distinguishing Between Similar Diseases -- Multi-resolution Image Parametrization in Stepwise Diagnostics of Coronary Artery Disease -- Classifying Alarms in Intensive Care - Analogy to Hypothesis Testing -- Hierarchical Latent Class Models and Statistical Foundation for Traditional Chinese Medicine -- Interpreting Gene Expression Data by Searching for Enriched Gene Sets -- Variable Selection for Optimal Decision Making -- Supporting Factors in Descriptive Analysis of Brain Ischaemia -- Knowledge Acquisition from a Medical Corpus: Use and Return on Experiences -- Machine Learning Techniques for Decision Support in Anesthesia -- Learning Decision Tree for Selecting QRS Detectors for Cardiac Monitoring -- Monitoring Human Resources of a Public Health-CareSystem Through Intelligent Data Analysis and Visualization -- An Integrated IT System for Phenotypic and Genotypic Data Mining and Management -- Automatic Retrieval of Web Pages with Standards of Ethics and Trustworthiness Within a Medical Portal: What a Page Name Tells Us -- A Mixed Data Clustering Algorithm to Identify Population Patterns of Cancer Mortality in Hijuelas-Chile -- Novel Features for Automated Lung Function Diagnosis in Spontaneously Breathing Infants -- Multi-level Clustering in Sarcoidosis: A Preliminary Study -- Text Mining, Natural Language Processing and Generation -- An Experiment in Automatic Classification of Pathological Reports -- Literature Mining: Towards Better Understanding of Autism -- Automatic Generation of Textual Summaries from Neonatal Intensive Care Data -- Anonymisation of Swedish Clinical Data -- MetaCoDe: A Lightweight UMLS Mapping Tool -- Unsupervised Documents Categorization Using New Threshold-Sensitive Weighting Technique -- Application of Cross-Language Criteria for the Automatic Distinction of Expert and Non Expert Online Health Documents -- Extracting Specific Medical Data Using Semantic Structures -- Ontologies -- Using Semantic Web Technologies for Knowledge-Driven Querying of Biomedical Data -- Categorical Representation of Evolving Structure of an Ontology for Clinical Fungus -- Replacing SEP-Triplets in SNOMED CT Using Tractable Description Logic Operators -- Building an Ontology of Hypertension Management -- Analyzing Differences in Operational Disease Definitions Using Ontological Modeling -- Decision Support Systems -- Adaptive Optimization of Hospital Resource Calendars -- On the Behaviour of Information Measures for Test Selection -- Nasopharyngeal Carcinoma Data Analysis with a Novel Bayesian Network Skeleton Learning Algorithm -- Enhancing Automated Test Selection in Probabilistic Networks -- ProCarSur: A System for Dynamic Prognostic Reasoning in Cardiac Surgery -- Content Collection for the Labelling of Health-Related Web Content -- Bayesian Network Decomposition for Modeling Breast Cancer Detection -- A Methodology for Automated Extraction of the Optimal Pathways from Influence Diagrams -- Computer-Aided Assessment of Drug-Induced Lung Disease Plausibility -- Applications of AI-Based Image Processing Techninques -- Segmentation Techniques for Automatic Region Extraction: An Application to Aphasia Rehabilitation -- A Pattern Recognition Approach to Diagnose Foot Plant Pathologies: From Segmentation to Classification -- A Novel Way of Incorporating Large-

Scale Knowledge into MRF Prior Model -- Predictive Modeling of fMRI Brain States Using Functional Canonical Correlation Analysis -- Protocols and Guidelines -- Formalizing ‘Living Guidelines’ Using LASSIE: A Multi-step Information Extraction Method -- The Role of Model Checking in Critiquing Based on Clinical Guidelines -- Integrating Document-Based and Knowledge-Based Models for Clinical Guidelines Analysis -- Document-Oriented Views of Guideline Knowledge Bases -- Maintaining Formal Models of Living Guidelines Efficiently -- A Causal Modeling Framework for Generating Clinical Practice Guidelines from Data -- Semantic Web Framework for Knowledge-Centric Clinical Decision Support Systems -- Inference in the Promedas Medical Expert System -- Computerised Guidelines Implementation: Obtaining Feedback for Revision of Guidelines, Clinical Data Model and Data Flow -- Workflow Systems -- Querying Clinical Workflows by Temporal Similarity -- Testing Careflow Process Execution Conformance by Translating a Graphical Language to Computational Logic -- Induction of Partial Ordersto Predict Patient Evolutions in Medicine -- Interacting Agents for the Risk Assessment of Allergies in Newborn Babies.

Sommario/riassunto

This book constitutes the refereed proceedings of the 11th Conference on Artificial Intelligence in Medicine in Europe, AIME 2007, held in Amsterdam, The Netherlands in July 2007. The 28 revised full papers and 38 revised short papers presented were carefully reviewed and selected from 137 submissions. The papers are organized in topical sections on agent-based systems, temporal data mining, machine learning and knowledge discovery, text mining, natural language processing and generation, ontologies, decision support systems, applications of AI-based image processing techniques, protocols and guidelines, as well as workflow systems.