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| Disciplina              | 006.3   |
| Soggetti                | Artificial intelligence<br>Artificial Intelligence  |
| 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       | Invited Talks -- Automated Reasoning Tools for Molecular Biology -- ?<br>mega: Computer Supported Mathematics -- An Overview of Planning<br>Technology in Robotics -- SmartWeb: Mobile Applications of the<br>Semantic Web -- Machine Learning for Autonomous Robots -- Natural<br>Language Processing -- Generation of Sentence Parse Trees Using Parts<br>of Speech -- Application of Machine Learning Techniques to the Re-<br>ranking of Search Results -- A Pragmatics-First Approach to the<br>Analysis and Generation of Dialogues -- Hybrid Natural Language<br>Generation in a Spoken Language Dialog System -- Error-Tolerant<br>Finite-State Lookup for Trademark Search -- Knowledge<br>Representation and Ontologies -- Mining Hierarchical Temporal<br>Patterns in Multivariate Time Series -- Using Behavioral Knowledge for<br>Situating Prediction of Movements -- Integration of Manual and<br>Automatic Text Categorization. A Categorization Workbench for Text-<br>Based Email and Spam -- Model Based Deduction for Database Schema<br>Reasoning -- Planning and Search -- Applying Automatic Planning<br>Systems to Airport Ground-Traffic Control -- A Feasibility Study --<br>Generalizing the Relaxed Planning Heuristic to Non-linear Tasks --<br>Decision-Theoretic Planning for Playing Table Soccer -- External A* --<br>Neural Networks and Machine Learning -- Combining Recurrent Neural |

Networks and Support Vector Machines for Structural Pattern Recognition -- Genre Classification of Web Pages -- Integration of Statistical and Neural Methods to Design Classifiers in Case of Unequal Covariance Matrices -- Semiring Artificial Neural Networks and Weighted Automata -- A New Method to Fit a Linear Regression Model for Interval-Valued Data -- Reasoning -- Specifying Abnormal Action Qualifications with Sensing in FLUX -- On-Line Decision-Theoretic Golog for Unpredictable Domains -- Relation Variables in Qualitative Spatial Reasoning -- Default Reasoning over Domains and Concept Hierarchies -- Improving Fault Localization of Programs by Using Labeled Dependencies -- Improving the Scalability of Rule Base Verification Using Binary Decision Diagrams: An Empirical Study -- Modeling of Tutoring Processes in Intelligent Tutoring Systems -- Robotics and Machine Perception -- A New Method for Asynchronous Multisensor Information Fusion -- Adaptive Vision for Playing Table Soccer -- Shape-Based Robot Mapping -- Vision-Based Facial and Eye Gaze Tracking System.

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Sommario/riassunto

KI2004 was the 27th edition of the annual German Conference on Artificial Intelligence, which traditionally brings together academic and industrial researchers from all areas of AI and which enjoys increasing international attendance. KI 2004 received 103 submissions from 26 countries. This volume contains the 30 papers that were finally selected for presentation at the conference. The papers cover quite a broad spectrum of "classical" subareas of AI, like natural language processing, neural networks, knowledge representation, reasoning, planning, and search. When looking at this year's contributions, it was exciting to observe that there was a strong trend towards actual real-world applications of AI technology. A majority of contributions resulted from or were motivated by applications in a variety of areas. Examples include applications of planning, where the technology is being exploited for taxiway traffic control and game playing; natural language processing and knowledge representation are enabling advanced Web-based information processing; and the integration of results from automated reasoning, neural networks and machine perception into robotics leads to significantly improved capabilities of autonomous systems. The technical programme of KI 2004 was highlighted by invited talks from outstanding researchers in the areas of automated reasoning, robot planning, constraint reasoning, machine learning, and semantic Web: Jorg Siekmann (DFKI and University of Saarland, Saarbrücken), Malik Ghallab (LAAS-CNRS, Toulouse), Franco Fages (INRIA Rocquencourt), Martin Riedmiller (University of Saarbrücken), and Wolfgang Wahlster (DFKI and University of Saarland, Saarbrücken). Their invited papers are also presented in this volume.

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