

F. Belli F. J. Radermacher (Eds.)

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Series Editor

Jörg Siekmann
University of Saarland
German Research Center for Artificial Intelligence (DFKI)
Stuhlsatzenhausweg 3, W-6600 Saarbrücken 11, FRG

Volume Editors

Fevzi Belli
University of Paderborn, Dept. of Electrical Engineering
P. O. Box. 1621, W-4790 Paderborn, FRG

Franz Josef Radermacher
Forschungsinstitut für anwendungsorientierte Wissensverarbeitung (FAW)
P. O. Box 2060, W-7900 Ulm, FRG

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Address by the Federal
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Technology



The general conditions which will characterize industrial production in the next century have already become visible; they include increasing complexity, greater demands for flexibility and quality, growing division of labour, and even shortening cycles of development and production.

Good provision for the next century is the preparation for future systems that allow rapid and independent access to general knowledge whenever required for solving particular problems while being capable of handling even incomplete and inaccurate knowledge, in other words: preparation for systems of artificial intelligence.

This is a complex goal, however, which undoubtedly involves enormous difficulties. The approach should be via reasonable and reachable subgoals in order to avoid setbacks and frustration.

The Federal Minister for Research and Technology has been supporting research and development projects in the field of artificial intelligence since 1984; up to now about DM 225 million have been earmarked predominantly for expert systems as well as for image and natural-language processing systems.

This support has contributed substantially to the dissemination and further development of the scientific methods for artificial intelligence in universities and research institutions throughout the Federal Republic of Germany; cooperative projects provide a direct link with the industry. Germany's efforts in this field are recognized by the international community.

In Germany today a number of enterprises offer tools for expert systems, and various system houses using the relevant additional knowledge market complete expert systems. Mainly in industry as well as in the banking and insurance business such systems have so far been applied above all for diagnosis, counselling, configuration and planning.

When supporting artificial intelligence research in the years to come the Federal Minister for Research and Technology will attach increasing importance to the subsequent application of research results. This does not mean, however, that the need for further basic research is questioned.

All the best for the success of the Fifth International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems in Paderborn.

Dr. Heinz Riesenhuber

A handwritten signature in black ink, which appears to read "H. Riesenhuber". The signature is fluid and cursive, with a long horizontal stroke at the end.

Address by the General Chairman and the Program Chairmen

Welcome to The Fifth International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE-92). Through this annual international conference we have been achieving our objective of providing a forum for the international community to discuss recent successes in Artificial Intelligence, Expert Systems, Neural Nets, CAD/CAM, and many other related areas in the industrial and engineering environment. The 72 reviewed papers and 5 invited papers presented at this conference cover these areas from various perspectives and multilateral points of view.

This is the first time that an IEA/AIE conference is taking place outside USA. We have received more than 120 papers from 23 countries, clearly indicating the international character of this conference series. Each paper has been reviewed by at least three referees. The organization of the IEA/AIE-92 was made possible only because of the intensive and diligent efforts of many people, and because of the sponsorship of several companies and of the University of Paderborn, Southwest Texas State University, and the FAW Ulm/Germany. Our thanks are due also to the members of the program committee, to the external referees, and - last but not least - to the authors who submitted their papers. Our special thanks go to the Springer-Verlag for the excellent cooperation.

We hope you will gain deeper insight into the multidimensional research concerning applied Artificial Intelligence topics in industry, interact with other participants in addressing your own challenging research problems, and enjoy the exciting settings of Paderborn and Central Germany.

Moonis Ali

Fevzi Belli

Franz Josef Radermacher

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Table of Contents

Invited Presentations

| | |
|--|----|
| Gaining Strategic Advantage with Real-Time Distributed Artificial Intelligence <i>Y. Lirov</i> | 1 |
| Intelligent Databases and Interoperability <i>A.B. Cremers, G. Kniesel, T. Lemke, L. Plümer</i> | 15 |
| The TOVE Project: Towards a Common-Sense Model of the Enterprise <i>Mark S. Fox</i> | 25 |
| Automatization in the Design of Image Understanding Systems <i>B. Radig, W. Eckstein, K. Klotz, T. Messer, J. Pauli</i> | 35 |
| Constraint Programming - an Alternative to Expert Systems <i>M. Dincbas</i> | 46 |

CAM I (Chair: O. Abeln, FZI/Karlsruhe)

| | |
|--|----|
| Case-Based Reasoning in Expert Systems Assisting Production Line Design <i>H. Yamamoto, H. Fujimoto</i> | 49 |
| Scaling-Up Model-Based Troubleshooting by Exploiting Design Functionalities <i>J. Vanwelkenhuysen</i> | 59 |
| Application of Knowledge-Based Systems to Optimised Building Maintenance Management <i>G. Clark, P. Mehta, T. Thomson</i> | 69 |

Reasoning and Modelling (Chair: O. Günther, FAW/Ulm)

| | |
|---|-----|
| Application of Model-Based Reasoning to the Maintenance of Telecommunication Networks <i>W. Kehl, H. Hopfmüller, T. Koussev, M. Newstead</i> | 79 |
| Advanced Information Modelling for Integrated Network Management Applications <i>M.A. Newstead, B. Stahl, G. Schapeler</i> | 89 |
| An Integration of Case-Based and Model-Based Reasoning and its Application to Physical System Faults <i>T. Karamouzis, S. Feyock</i> | 100 |

Pattern Recognition (Chair: D. Barschdorff, Univ. Paderborn)

| | |
|--|-----|
| Analysing Particle Jets with Artificial Neural Networks <i>K.-H. Becks, J. Dahm, F. Seidel</i> | 109 |
| Convergence Behaviour of Connectionist Models in Large Scale Diagnostic Problems <i>L. Monostori, A. Bothe</i> | 113 |
| Pattern Recognition Approach to an Acoustical Quality Test of Burnt Ceramic Products <i>B. Kotterba</i> | 123 |

Software Engineering and AI/ES**(Chair: F. Saglietti, Gesellschaft für Reaktorsicherheit/Garching)**

| | |
|--|-----|
| Enhancing Software Engineering Capabilities of PROLOG by Object-Oriented Concepts <i>B. Müller</i> | 127 |
| Specifying Decision-Making Processes <i>A. Borden, U. Cinar</i> | 139 |
| Operationalizing Software Reuse as a Problem in Inductive Learning <i>R.G. Reynolds, J.I. Maletic, E. Zannoni</i> | 143 |

CAD I (Chair: R. Koch, Univ. Paderborn)

| | |
|--|-----|
| Towards a Real CAD-System Using Artificial Intelligence Technology <i>Ir. W. Zeiler</i> | 154 |
| WIZ - A Prototype for Knowledge-Based Drawing Interpretation <i>B. Pasternak, G. Gabrielides, R. Sprengel</i> | 164 |
| Intelligent System for Feature-Based Modelling of Machine Parts <i>A. Lekova, D. Batanov, N. Nikolaev</i> | 174 |

Vision (Chair: U. Cinar, STC/The Hague)

| | |
|---|-----|
| Intelligent Process Control by Means of Expert Systems and Machine Vision <i>Ll. Vila, C. Sierra, A.B. Martinez, J. Climent</i> | 185 |
| Tracking and Grasping of Moving Objects - a Behaviour-Based Approach <i>U. Schnepf, A. Asteroth, M.S. Fischer, K. Möller</i> | 195 |
| PANTER - Knowledge Based Image Analysis System for Workpiece Recognition <i>B. Mertsching</i> | 205 |



Verification and Validation (Chair: G. Forsyth, DSTO/Melbourne)**KITSS: Using Knowledge-Based Software Engineering for Functional Testing***U. Nonnenmann, J.K. Eddy* 215**Complex Knowledge Base Verification Using Matrices***N. Botten* 225**Structural Testing Strategies Applied to Knowledge-Based Systems***F. Saglietti* 236**Neural Networks (Chair: M. Ali, Univ. SWTexas)****Retraining and Redundancy Elimination for a Condensed Nearest Neighbour Network***D. Barschdorff, A. Bothe, U. Gärtner, A. Jäger* 246**A Multiple Paradigm Diagnostic System for Wide Area Communication Networks***B. Pagurek, N. Dawes, R. Kaye* 256**Recursive Neural Net Modeling of a Multi-Zone Tenter Frame Dryer***G. Lackner (Univ. Stuttgart), S.S. Melsheimer, J.N. Beard* 266**CAM II (Chair: S. Omlor, Telenorma/Frankfurt)****Representation of the Design to Manufacture Methodology of the Armour Protection Element of the Fibre Optic Submarine Cable Within an Expert System***D. Bayliss, S. Berry, D. Curtis, B. Cox* 276**PIM - Planning in Manufacturing - CAPP Using Skeletal Plans***A. Bernardi, C. Klauck, R. Legleitner* 284**Visual Modelling: A Knowledge Acquisition Method for Intelligent Process Control Systems***D. Schmidt, J. Haddock, W.A. Wallace, R. Wright* 294**Machine Learning (Chair: R. Wirth, FAW/Ulm)****Machine Learning in Communication Nets***F. Lehmann, R. Seising, E. Walther-Klaus* 304**Supporting Model-Based Diagnosis with Explanation-Based Learning and Analogical Inferences***D. Specht, S. Weiß* 314**A Knowledge-Based System for the Diagnosis of Waste-Water Treatment Plants***Ll. Belanche, M. Sánchez, U. Cortés, P. Serra* 324

Fuzzy Logic and Control (Chair: T. Tanaka, Fukuoka Inst. Techn.)**Connectionism for Fuzzy Learning in Rule-Based Expert Systems***LiMin Fu* 337**Extending Constraint Satisfaction Problem Solving in Structural Design***Qi Guan, G. Friedrich* 341**A Modulation Package Tuning Machine Applying Fuzzy Logic***A. Ukita, T. Kitagawa* 351**Robotics (Chair: Ch. Blume, FH Köln)****Towards Intelligent Robotic Assemblies***C. Ramos, E. Oliveira* 361**Action Planning for Multiple Robots in Space***U. Kernebeck* 371**A Calibration of a Mobile Camera Used for a Camera-Guided****Grasping by an Eye-In-Hand Robot***A. Schrott* 381**Design and Architecture (Chair: P.H. Sydenham, Univ. S. Australia)****STRICT: Selecting the 'Right' Architecture***S. Kirn, J. Schneider* 391**Solving Temporal Constraints Satisfaction Problems
with an Object-Oriented Model***L. Cervoni, F. Rousseaux* 401**An Integration Mechanism for Design Models in the Design****Environment DATE***H. Arai, Y. Fukazawa, T. Kadokura, T. Hasegawa* 411**Configuration (Chair: M. Ziegenbalg, HS Bremerhaven)****Configuration of a Passenger Aircraft Cabin Based on Conceptual
Hierarchy, Constraints and Flexible Control***M. Kopisch, A. Günther* 421**Configuration of Industrial Mixing-Machines-Development of a
Knowledge-Based System***A. Brinkop, N. Laudwein* 431**A Theoretical Framework for Configuration***O. Najmann, B. Stein* 441

Finance (Chair: H. Bonin, FH Nordostniedersachsen)

| | |
|---|-----|
| Stock Market Prediction with Backpropagation Networks <i>B. Freisleben</i> | 451 |
| Forecasting Time Series with Connectionist Nets: Applications in Statistics, Signal Processing and Economics <i>C. de Groot, D. Würtz</i> | 461 |
| ILISCE: A System for Learning Control Heuristics in a Scheduling Environment <i>T. Van de Merckt</i> | 471 |

Knowledge-Based Systems I (Chair: L. Thomas, SNI/Paderborn)

| | |
|---|-----|
| KUSET - Knowledge Based User Support for Electron Beam Testing <i>G. Weichert, R. Lackmann</i> | 481 |
| Knowledge-Based Design of Ergonomic Lighting for Underground Scenarios <i>W. Burgard, S. Lüttringhaus-Kappel, L. Plümer</i> | 491 |
| A Monitoring Approach Supporting Performance Analysis of Expert Systems for the EMC Design of Printed Circuit Boards <i>R. Brüning, W. Hauenschild, W. John</i> | 495 |

Knowledge Representation (Chair: A.B. Cremers, Univ. Bonn)

| | |
|---|-----|
| Representing Geometric Objects Using Constraint Description Graphs <i>B. Zalik, N. Guid, A. Vesel</i> | 505 |
| A Terminological Language for Representing Complex Knowledge <i>D. D'Aloisi</i> | 515 |
| Knowledge Representation and Decision Making: A Hybrid Approach <i>S. Goss, I. Wallace, K. Bluff</i> | 525 |

**Knowledge Acquisition and Language Processing
(Chair: Th. Christaller, GMD/Bonn)**

| | |
|---|-----|
| Knowledge Acquisition from Text in a Complex Domain <i>G. Schmidt</i> | 529 |
| Parallel Parsing of Ambiguous Languages on Hypercube Architectures <i>R.A. Reid, M.M. Matthews</i> | 539 |
| Towards Knowledge Acquisition by Experts <i>F. Puppe, U. Gappa</i> | 546 |

Reasoning and Decision Support (Chair: G. Sagerer, Univ. Bielefeld)

The Rough Sets Approach to Knowledge Analysis for Classification
Support in Technical Diagnostics of Mechanical Objects

J. Stefanowski, R. Nowicki, R. Slowinski 556

Bi-Directional Probabilistic Assessment

B.W. Hagen 566

Reasoning under Uncertainty with Temporal Aspects

D. Nauck, F. Klawonn, R. Kruse, U. Lohs 572

Knowledge-Based Systems II (Chair: E. Maehle, Univ. Paderborn)

An Expert System Approach for Power System Diagnosis

Z.A. Vale, A. Machado e Moura 581

DELPHI-EXPERT: An Expert System for Error Diagnosis in
High Energy Physics Detectors

K.-H. Becks, A. Hemker, J. Ortmann, G. Schlageter, R. Meyer, A.B. Cremers 585

Combining Real-Time with Knowledge Processing Techniques

W. Brockmann 594

Intelligent Interfaces/DB and Tutoring

(Chair: H. Kleine-Büning, Univ. Paderborn)

Tailoring Advanced Instructional Software for AI

R.M. Aiken, D. Allemang 604

Interpreting Unexpected User Activity in an Intelligent User Interface

A.S. Tabandeh 614

Yet Another Knowledge-Based Front-End-To-Database Project

J. Mikulecká, P. Mikulecký 622

Fault Diagnosis (Chair: Y. Lirov, Salomon Bros/Rutherford,NJ)

Fault Diagnosis Based on Simulation Models

F. Plafmeier, R. Küke, D. Erner, K.F. Lehmann 626

Real-Time Fault Diagnosis - Using Occupancy Grids and Neural
Network Technology

A.K. Ray, R.B. Misra 636

Expert Systems for Fault Diagnosis on CNC Machines

E. Kurz 641



Planning and Scheduling (Chair: R.V. Rodriguez, Univ. W. Florida)

Design Efficient Local Search Algorithms

Jun Gu 651

The Design of Building Parts by Using Knowledge Based Systems

G. Ketteler, M. Lenart 655**Data/Sensor Fusion (Chair: U.L. Haass, FORWISS/Erlangen)**Information Fusion in a Knowledge-Based Classification and
Tracking System*K.P. Mason* 666Numerical and Syntactic Tools for Fusion and Diagnosis Provided with the
TOPMUSS-System*F. Quante, H. Kirsch, M. Ruckhäberle* 676**CAD II (Chair: R. Aiken, Temple Univ.)**Learning Performance Estimations in a Knowledge Based
CAD-Environment*K. Milzner* 680Object Oriented Framework for Generating Machine Understanding
of a Digital System Design*P. Malhotra, R.E. Seviora* 690**Author Index** 701