

From the journals. . . .

AI magazine

Vol. 11 No. 1

Workshops

DARPA-sponsored workshop on artificial intelligence and marine design. Report of a workshop held at Rutgers University on January 10 and 11, 1989

Saul Amarel and Luis Steinberg

Research in progress

Directions in AI research and applications at Siemens Corporate Research and Development

Wolfram Buttner, Klaus Estenfeld, Hans

Haugeneder and Peter Struss

Articles

SPAR: A planner that satisfies operational and geometric goals in uncertain environments.

S. A. Hutchinson and A. C. Kak

Assembly sequence planning

Arthur C. Sanderson, Hui Zhang and Luiz S.

Homem de Mello

A group theoretic approach to assembly planning

Robin J. Popplestone, Yanxi Lui and Rich Weiss

Advertiser index

Association news

Books received

Book reviews

Events calendar

Guest editorial

Letters

New products

Vol. 11 No. 2

Articles

Components of expertise

Luc Steels

Technology, work, and the organization: The impact of expert systems

Rob R. Weitz

AI planning: Systems and techniques

James Hendler, Austin Tate and Mark Drummond

Advertiser index

AAAI news

Book reviews

Editorial

Events calendar

Letters

New products

Workshop reports

Future directions in NLP: The BBN natural language symposium

Mark T. Maybury

Term subsumption languages in knowledge representation

Peter F. Patel-Schneider, Bernd Owsnicki-Klewe, Alfred Kobsa, Nicola Guarino, Robert MacGregor, William S. Mark, Deborah L. McGuinness, Bernhard Nebel, Albrecht Schmiedel and John Yen

Applied artificial intelligence: an international journal

Vol. 2 No. 1

Articles

A knowledge-based navigation scheme for autonomous land vehicles

Jeffrey J.-P. Tsai, Mark Metea and John Cesarone

SEDAF: An intelligent educational system for mathematics

Luigia Aiello and Alessandro Micarelli

An OPSS implementation of qualitative reasoning about physical systems

S. Gaglio, M. Giacomini, A. Ponassi and C.

Ruggiero

Knowledge transformation

Bernard A. Engel, Claire Baffaut, John R. Barrett,

Joseph B. Rogers and Don D. Jones

Book Reviews

Applied artificial intelligence calendar

Artificial intelligence

Vol. 42 Nos. 2-3

Articles

A critical examination of Allen's theory of action and time

A. Galton

Real-time heuristic search

R. E. Korf

Intention is choice with commitment

P. R. Cohen and H. J. Levesque

All I know: A study in autoepistemic logic

H. J. Levesque

A skeptical theory of inheritance in nonmonotonic semantic networks

J. F. Horty, R. H. Thomason and D. S. Touretzky

A dynamic systems perspective on qualitative simulation

E. Sacks

Quantitative results concerning the utility of explanation-based learning

S. Minton

The computational complexity of probabilistic inference using Bayesian belief networks (research note)

G. F. Cooper

Announcement

Forthcoming papers

Author index—volume 42, 1990

Contents—Volume 42, 1990

Vol. 43 No. 1

Special issue on Computer Chess

Articles

Introduction

H. J. Berliner and D. F. Beal

Measuring the performance potential of chess programs

H. J. Berliner, G. Goetsch, M. S. Campbell and C. Ebeling

The development of a world class Othello program

K.-F. Lee and S. Mahajan

Reasoning with uncertainty in computer chess

H. Horacek

An incremental negamax algorithm

I. Althöfer

Conspiracy numbers

J. Schaeffer

A generalised quiescence search algorithm

D. F. Beal

Singular extensions: Adding selectivity to brute-force searching

T. Anatharaman, M. S. Campbell and F.-H. Hsu

Perfect knowledge revisited

S. T. Dekker, H. J. van den Herik and I. S. Herschberg

Forthcoming papers

Vol. 43 No. 2

Articles

Dynamic backward reasoning systems

A. Ligeza

Pragmatics and natural language generation

E. H. Hovy

Shape from fractal geometry

S. S. Chen, J. M. Keller and R. M. Crownover

A rational reconstruction of nonmonotonic truth maintenance systems (research note)

C. Elkan

Terminological reasoning is inherently intractable (research note)

B. Nebel

Book review

Connections and Symbols, eds. S. Pinker and J. Mehler, reviewed by *M. Derthick*

Announcement

Forthcoming papers

Vol. 43 No. 3

Articles

Estimation of surface topography from SAR imagery using shape from shading techniques

R. T. Frankot and R. Chellappa

Exaggeration

D. S. Weld

Book review

Plans and Situated Actions: The Problem of Human-Machine Communication by L. A. Suchman, reviewed by *P. E. Agre*

Announcement

Forthcoming papers

Author index—Volume 43, 1990

Contents—Volume 43, 1990

Cognitive science

Vol. 14 No. 1

Special issue: Guest issue editor: Rochel Gelman

Articles

Editor's foreword

James G. Greeno

Structural constraints on cognitive development:

Introduction to a Special Issue of *Cognitive Science*

Rochel Gelman

Maturation constraints on language learning

Elissa L. Newport

Principles of object perception

Elizabeth S. Spelke

Constraints children place on word meanings

Ellen M. Markman

First principles organize attention to and learning about relevant data: Number and the animate-inanimate distinction as examples

Rochel Gelman

Domain-specific principles affect learning and transfer in children

Ann L. Brown

Constraints on constraints: Surveying the epigenetic landscape

Frank C. Keil

Safe takeoffs—soft landings

Douglas L. Medin, Woo-Kyoung Ahn, Jeffrey

Bettger, Judy Florian, Robert Goldstone, Mary

Lassaline, Arthur Markman, Joshua Rubinstein and

Edward Wisniewski

Computational intelligence: an international journal

Vol. 5 No. 4

Articles

Discontinuous grammars

Verónica Dahl

A note on evidence and confirmation in machine learning

James P. Delgrande

Constraint satisfaction algorithms

Bernard A. Nadel

Moments and points in an interval-based temporal logic

James F. Allen and Patrick J. Hayes

Computational linguistics

Vol. 15 No. 4

Articles

A parsing algorithm for unification grammar

Andrew Haas

Natural language generation from plans

Chris Mellish and Roger Evans

A formal model for context-free languages augmented with reduplication

Walter Savitch

Book reviews

Robert N. Moll, Michael A. Arbib and A. J. Kfoury,

An introduction to formal language theory, *reviewed by* Geoffrey K. Pullman

Mark Johnson, Attribute-value logic and the theory of grammar, *reviewed by* Robert Kuhns

Dan Maxwell, Klaus Schubert and Toon Witkam, eds., New directions in machine translation (Proceedings of the Conference, Budapest, August 1988), *reviewed by* Esméralda Manandise

Books received

Abstracts of current literature

Decision support systems

Vol. 6 No. 2

Articles

Introduction

Steven O. Kimbrough

The sensitivity properties of hierarchical logic-based models

Robert W. Blanning

On representation schemes for promising electronically

Steven O. Kimbrough

A logic modelling language for automated model construction

Ramayya Krishnan

Controlling expert system recommendations with defeasible logic

Donald Nute, Robert I. Mann and Betty F. Brewer

Meta-interpreters for rule-based inference under uncertainty

Shimon Schocken and Tim Finin

Reasoning with preferences and values

George R. Widmeyer

Announcements

Calendar

Expert systems

Vol. 7 No. 2

Articles

Introducing students to expert systems

John Durkin

Applying systems analysis techniques to knowledge engineering

Gail Swaffield and Brian Knight

Psychological validity of uncertainty combining rules in expert systems

Bruce E. Tonn and Richard T. Goeltz

Expert systems-based robot technology

Efraim Turban

Interview

Bill Sharpe

Kenneth Owen

Conference reports

The Expert System Lifecycle

Neural Computing: The Marketplace

Technical note

On maintaining and updating expert systems

Laurence A. Madeo and Reuven R. Levary

News

Applications

Development tools

Prolog

Book reviews

Diary

Expert systems with applications

Vol. 1 No. 1

Articles

Editorial

The maturing process of expert systems

Jay Liebowitz

Decision-theoretic approach to a knowledge-based clinical system

Jae Kyeong Kim, Boo Sik Kang and Soung Hie Kim

Business expert systems: The competitive edge

Daniel Schutzer

Intelligent decision support: Strategies for integrating decision support, database management, and expert system technologies

Dave King

UNIK-FCST: Knowledge-assisted adjustment of statistical forecasts

Jae Kyu Lee, Sang Bong Oh and Jung Cheol Shin

EXPERTEXT: From semantic nets to logic petri nets

Roy Rada, Paul E. S. Dunne and Judith Barlow

Toward structured expert systems development

Paul Alpar

Expert systems at the Navy Center for Applied Research in Artificial Intelligence

Randall Shumaker and Laura C. Davis

The knowledge engineering basis of expert systems

David Bendel Hertz

NTIS section

Software survey section

New patents

IEEE expert

Vol. 5 No. 1

AI myths, legends and facts

Articles

AI and expert system myths, legends and facts

Mark S. Fox

Adding temporal reasoning to expert-system-building environments

Walton A. Perkins and Avis Austin

Implementing fuzzy rule-based systems in silicon chips

Meng-Hiot Lim and Yoshiyasu Takefuji

Inductive learning for risk classification

Michael J. Shaw and James A. Gentry

Transfer pricing: Integrating expert systems in MIS environments

Yehuddah Freundlich

Printing press configuration: A knowledge-based approach

M. S. Lan and R. M. Panos

Vol. 5 No. 2

Tools and techniques

Articles

KIIS: A prototypical expert system for assessing technologies

Hamid Noori

A skill refinement learning model for rule-based expert systems

Pi-Sheng Deng, Clyde W. Holsapple and Andrew B. Shinston

Uncertainty management in expert systems

Keung-Chi Ng and Bruce Abramson

Situation assessment for process control

François Jakob and Pierre Suslenschi

An expert system for journal selection

Roy Rada

Strategic planning for expert systems

Bernard Moulin

IEEE transactions on pattern analysis and machine intelligence

Vol. 12 No. 2

Articles

Computer vision and image analysis

Computing the aspect graph for line drawings of polyhedral objects

Z. Gigus and J. Malik

Effectively labelling planar projections of polyhedra

L. M. Kirousis

Recovery of parametric models from range images:

The case for superquadrics with global deformations

F. Solina and R. Bajcsy

Range image acquisition with a single binary-encoded light pattern

P. Vuytsteke and A. Oosterlinck

Edge-labeling using dictionary-based relaxation

E. R. Hancock and J. Kittler

Search techniques

Expected-outcome: A general model of static evaluation

B. Abramson

Correspondence

Computer vision and image analysis

A system design/scheduling strategy for parallel image processing

S.-Y. Lee and J. K. Aggarwal

Classification techniques

Pattern representations and syntactic classification of radar measurements of commercial aircraft

O. S. Sands and F. D. Garber

Texture segmentation using Voronoi polygons

M. Tuceryan and A. K. Jain

A fast parallel algorithm for blind estimation of noise variance

P. Meer, J.-M. Jolion and A. Rosenfeld

Comments

Comments on "A three-module strategy for edge detection"

R.-H. Park and W. Y. Choi

Author's reply

V. Lacroix

Vol. 12 No. 3

Articles

Computer vision and image analysis

Integrating region growing and edge detection

T. Pavlidis and Y.-T. Liow

Scale-space for discrete signals

T. Lindeberg

On the sensitivity of the Hough transform for object recognition

W. E. L. Grimson and D. P. Huttenlocher

Discrete black and white object recognition via morphological functions

D. Sinha and C. R. Giardina

Learning

LEW: Learning by watching

P. Constant, S. Matwin and F. Oppacher

Correspondence

Computer vision and image analysis

Stereo correspondence by surface reconstruction

S. I. Olsen

Convolution on mesh connected multicomputers

S. Ranka and S. Sahni

Vol. 12 No. 4

Articles

Computer vision and image analysis

Coping with discontinuities in computer vision: Their detection, classification and management

D. Lee

Shape reconstruction on a varying mesh

I. Weiss

The chain pyramid: Hierarchical contour processing

P. Meer, C. A. Sher and A. Rosenfeld

Reconstructing convex sets from support line measurements

J. L. Prince and A. S. Willsky

Computational geometry

An interobject distance measure based on medial axes retrieved from discrete distance maps

P.-O. Forsgren and P. Seideman

Correspondence

Computer vision and image analysis

A frequency domain algorithm for multiframe detection and estimation of dim targets

B. Porat and B. Friedlander

Modeling light reflection for computer color vision

H.-C. Lee, E. J. Breneman and C. P. Shulte

High-speed triangulation-based 3-D imaging with orthonormal data projections and error detection

D. D. Harrison and M. P. Weir

Vol. 12 No. 5

Articles

Computer vision and image analysis

Motion estimation with more than two frames

H. Shariat and K. E. Price

Direct analytical methods for solving Poisson equations in computer vision problems

T. Simchony, R. Chellappa and M. Shao

Probabilistic reasoning

The combination of evidence in the transferable belief model

P. Smets

Learning

Learnable and nonlearnable visual concepts

H. Shvaytser

Correspondence

Computer vision and image analysis

Stochastic analysis of stereo quantization error

J. J. Rodríguez and J. K. Aggarwal

Partial shape recognition: A landmark-based approach

N. Ansari and E. J. Delp

On curve matching

H. J. Wolfson

Invariant image recognition by Zernike moments

A. Khotanzad and Y. H. Hong

Threshold superposition in morphological image analysis systems

P. Maragos and R. D. Ziff

Correspondence stereo and motion: Planar surfaces

J. Aloimonos and J.-Y. Hervé

Call for papers