# AAAI-91
IAAI–91
Program

Ninth National Conference on Artificial Intelligence

Third Innovative Applications of Artificial Intelligence Conference

July 14–19, 1991

Anaheim Convention Center
Anaheim, California
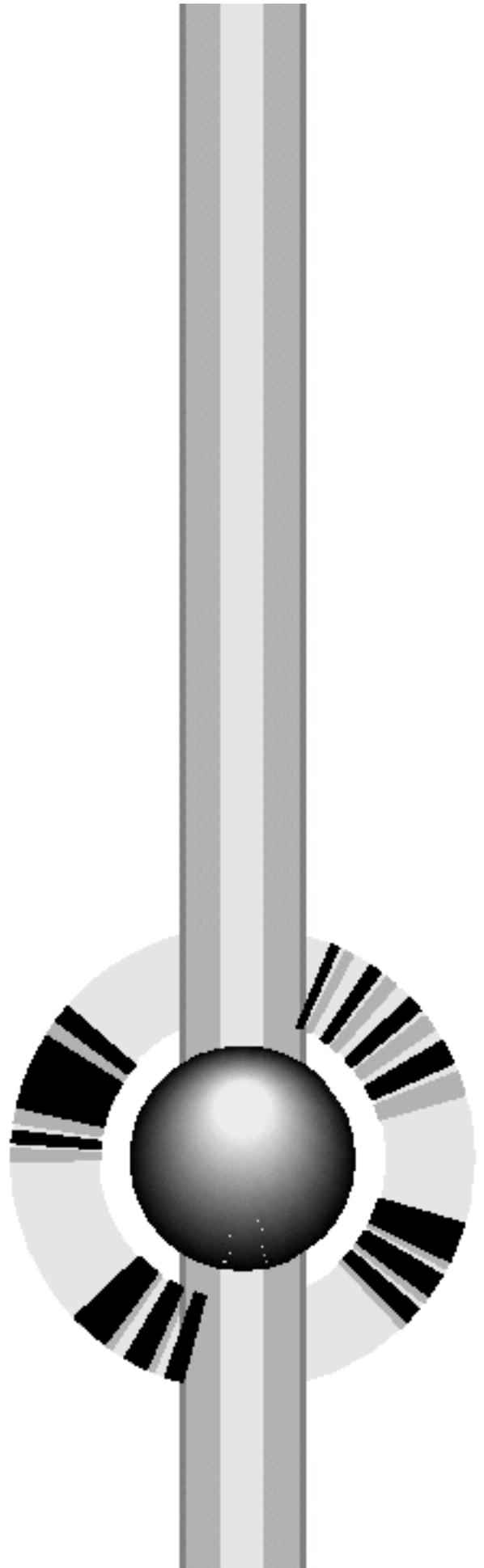
2   AAAI-91 Conference at a Glance

TUESDAY, 16 July 1991

8:30 AM - 10:30 AM	10:55 AM - 12:50 PM	2:00 PM - 4:00 PM	4:00 PM - 6: 00 PM

Plenary Session

Invited Speakers and Panels

Communication and Cooperation Forum

Reasoning About Physical Systems Forum

Formal Methods in Knowledge Representation Forum

WEDNESDAY, 17 July 1991

8:25 AM – 10:30 AM	10:30 AM - 12:40 PM	2:00 PM - 4:00 PM	4:00 PM - 6: 00 PM

Invited Speakers and Panels

Communication and Cooperation Forum

Planning, Perception, and Robotics Forum

Learning Forum

THURSDAY, 17 July 1991

8:25 AM - 10:30 AM	10:30 AM - 12:40 PM	2:00 PM - 4:00 PM	4:00 PM – 6: 00 PM

Invited Speakers and Panels

CASE-Based Reasoning Forum	Issues in Automated Reasoning Forum

Planning, Perception, and Robotics Forum

Constraint Reasoning and Component Technologies Forum

FRIDAY, 17 July 1991

8:25 AM - 10:30 AM	10:30 AM - 12:40 PM

Invited Speakers & Panels

Issues in Automated Reasoning Forum

Tractable Issues Forum

Constraint Reasoning & Component Technologies Forum

Plenary Session

MONDAY, 15 July 1991—IAAI

8:20 AM – 12:00		1:30 PM - 6:30 PM	
Finance and Banking		Airlines and Scheduling	

TUESDAY, 16 July 1991—IAAI

8:30 AM – 10:30 AM		1:30 PM - 5:30 PM	
Plenary Address		Engineering and Manufacturing	

WEDNESDAY, 17 July 1991—IAAI

8:20 AM – 10:20 AM	10:40 AM – 12:00	1:30 PM – 2:50 PM	3:10 PM – 6:10 PM
Government Applications	Miscellaneous	Diagnosis	Failure Analysis

TUESDAY, 16 July 1991—AI-On-Line

		2:00 PM – 4:00 PM	
		Gensym & Neural Ware	

WEDNESDAY, 17 July 1991—AI-On-Line

	10: 30 AM – 12:30	2:00 PM – 4:00 PM	
	Cognitive Systems & Inference	Digital Equipment	

THURSDAY, 18 July 1991—AI-On-Line

8:15 AM – 10:15 AM	10: 45 AM – 12:45 PM	1:00 PM – 3:00 PM	3:30 PM – 5:30 PM
AI Corp	Arthur Andersen & Schwartz Assoc.	IBM	Carnegie Group

TUESDAY, 16 July 1991—Exhibits

	12:00 – 6:00 PM
	Exhibit Program

WEDNESDAY, 17 July 1991—Exhibits

	10:00 AM – 6:00 PM
	Exhibit Program

THURSDAY, 18 July 1991—Exhibits

	10:00 AM – 4:00 PM
	Exhibit Program

SUNDAY, 14 July 1991—Tutorials

9:00 AM – 1:00 PM	2:00 PM – 6:00 PM

MONDAY, 15 July 1991—Tutorials

9:00 AM – 1:00 PM	2:00 PM – 6:00 PM

4 General Information

ADMISSION

Each conference attendee will receive a name badge upon registration. This badge is required for admittance to the technical, tutorial, IAAI, exhibit and AI-on-Line programs. Admittance to the tutorials is by **ticket only**. SMOKING, DRINKING, AND EATING ARE NOT ALLOWED IN ANY OF THE CONFERENCE SESSIONS OR ON THE EXHIBIT FLOOR.

AI-ON-LINE

Held in conjunction with the AAAI-91/IAAI-91 Joint Exhibition, AI-on-Line will be held Tuesday, July 16 through Thursday, July 18 in the Anaheim Room, Anaheim Convention Center, and will focus on users' issues. This series of short panels will be followed by interactive discussions. Please consult the program schedule for session times.

BAGGAGE CLAIM

There is no baggage claim/check area at the Anaheim Convention Center. Both the Anaheim Hilton and the Anaheim Marriott provide this service. Please see the Bell Captain in the hotel lobby. Neither the AAAI nor the Anaheim Convention Center accept liability for the loss or theft of any suitcase, briefcase, or other personal belongings brought to the site of AAAI-91.

BANKING

The closest full service bank to the Anaheim Convention Center is the Bank of America, located at 2260 South Harbor Boulevard, 714/778-8292. The banks hours are Monday through Thursday, 9:00 AM – 4:00 pm; Friday, 9:00 AM – 6:00 pm; and Saturday, 9:00 AM – 1:00 pm. Exchange of all major foreign currencies is available. Both the Anaheim Hilton and the Anaheim Marriott Hotels provide limited foreign currency exchange as well. Inquire at hotel front desk for further information.
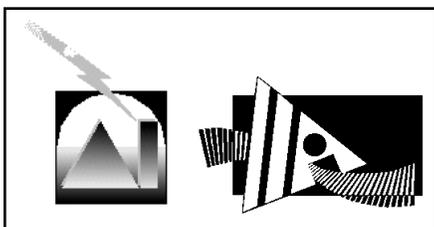
CHILD CARE

Child care will be provided by KiddieCorp. Experienced staff offer CLUB KID, a program geared towards infants, preschool and school-age children up to age 11. Fees include age-appropriate games and toys; arts and crafts; a separate, supervised nap room; movies and videos; and snacks. Morning sessions include lunch; afternoon sessions on Tuesday and Thursday include dinner.

The schedule for CLUB KID is:

Sunday, July 14

Session I	Session II
8:00 AM–1:00 PM	1:00–6:30 PM

Monday, July 15

Session I	Session II
8:00 AM–1:00 PM	1:00–6:30 PM

Tuesday, July 16

Session I	Session II
8:00 AM–1:00 PM	1:00–7:30 PM

Wednesday, July 17

Session I	Session II
8:00 AM–1:00 PM	1:00–6:00 PM

Thursday, July 18

Session I	Session II
8:00 AM–1:00 PM	1:00–7:30 PM

Friday, July 19

Session I
8:00 AM-12:30 PM

CLUB KID is $5.00 per hour, and will be located in the La Jolla/Los Angeles California Meeting Rooms, Lower Level, Anaheim Marriott. **To register, please come to Onsite Registration,** California Room, Anaheim Convention Center. **Space is limited.** If you have preregistered, you may go directly to CLUB KID.

COFFEE BREAKS

Coffee Breaks for the Technical Forums will be held outside the forum rooms in the Marriott Ballroom Foyer and the Marriott Hall Foyer from 10:30 – 11:00 AM and 3:20 – 4:00 pm. Meet-the-Author sessions will be held in conjunction with these breaks.

Coffee Breaks for the Tutorials will be held at 10:30 aM and 3:30 PM in the Pacific Room Lobby and the Santa Ana Room (A9/10):Lanai Lobby

Coffee Breaks for IAAI-91 will be held at 10:20 AM and 2:50 pm in the Marriott Ballroom Foyer.

Coffee Breaks for the Workshops will be held outside the workshop rooms at 10:30 AM and 3:30 pm.

COPY SERVICES

The closest copying center is Copy Net, located at 800 West Katella Avenue, 714/999-8999.

DINING

A complete Anaheim dining guide is included in your conference packet. Concessions will be open in Exhibition Hall B during exhibit hours.

DISNEYLAND

Special AAAI-91/IAAI-91 Disneyland Convention Passports at 25% off the regular admission price will be on sale in Onsite Registration, California Room, Anaheim Convention Center. They may be used during park hours for **one day only** from July 15 – 19, 1991. A passport entitles you to unlimited use of all attractions (except arcades) plus free parking. Passports are $20.50 for adults, and $16.75 for children, ages 3-11.

EXHIBIT ENTRANCE

Conference attendees must be wearing their conference registration or exhibitor badge to enter the Exhibition. Individuals holding vendor issued guest passes must come to Onsite Registration, California Room, Anaheim Convention Center for their badges. For further information, please see the Registrar in Onsite Registration (conference attendees) or come to the Exhibitor Registration Desk (exhibitors only) in the California Room, adjacent to the Exhibit Entrance.

EXHIBIT PROGRAM

The AAAI-91/IAAI-91 Joint Exhibition will be held Tuesday, July 16 through Thursday, July 18. Hardware and software manufacturers, publishers, universities and nonprofit organizations involved in artificial intelligence will display and demonstrate their current products, services, or research. Once again AAAI has given complimentary booths to university and nonprofit research organizations to demonstrate current AI research. The AAAI would like to thank the major computer equipment suppliers for donating equipment and technical support toward this demonstration program.

the **Applications Pavilion,** in which a series of vendor panels will be displayed, featuring new products. Please take a moment to visit the pavilion in the center of the exhibit floor.

The Exhibit Program is located in Exhibit Hall B, Anaheim Convention Center. Exhibit hours are:
Tuesday, 12:00 – 6:00 PM
Wednesday, 10:00 AM – 6:00 PM
Thursday, 10:00 AM – 4:00 PM

EXHIBITORS

The *AI Review* has a complete list of exhibitors, booth locations, and outline of products, services or research efforts. In addition, there are short articles submitted by exhibitors discussing technical aspects of their products or services. Extra copies of this review are available at Onsite Registration or at the Exhibitor Registration Desk, both located in the California Room, Anaheim Convention Center.

HANDICAPPED FACILITIES

The Anaheim Convention Center, the Anaheim Hilton, and the Anaheim Marriott all have complete handicapped facilities.

HOUSING

A representative from the Anaheim Visitors and Convention Bureau Housing Office will be available to answer your questions at the Housing Desk, California Room, Anaheim Convention Center during registration hours.

INFORMATION DESK

An information desk, located in the California Room, Anaheim Convention Center, will be staffed during registration hours, Sunday through Friday, July 14 – 19.

LIST OF ATTENDEES

A list of preregistered attendees of the conference will be available for review at the Registrar's Desk, Onsite Registration, California Room, Anaheim Convention Center. Lists of attendees will not be distributed.

MESSAGE CENTER

A message desk will be manned in the California Room, Anaheim Convention Center during registration hours. Message terminals for sending and receiving messages will be located in the California Room. Access to the message system is limited to **registered** conference attendees. Instructions for using the messaging system are located next to each terminal. The telephone number for **leaving messages only** is 714/490-2327.

THERE IS NO MEANS OF PAGING CONFERENCE ATTENDEES. All phone messages can be retrieved from any message terminal in the California Room during registration hours. There will be no access to terminals after hours. We suggest that hotel phone numbers be used as primary contact points.

PARKING

Parking is available at all three AAAI-91/IAAI-91 conference sites. Anaheim Convention Center parking is $6.00 per day. No overnight parking is allowed. Anaheim Hilton self-parking is $5.00 per day; valet, $7.00 per day. Anaheim Marriott parking is $5.00 per day, guests; $6.00 per day, non-guests; $10.00 per day, valet. Prices quoted are in effect at time of printing and are subject to change.

PRESS

All members of the media are requested to register in the Press Room in Room A16/17, Anaheim Convention Center. Press badges will only be issued to individuals with approved credentials. The Press Room will be open Sunday, July 14, 12:00 – 5:00 PM; and Monday through Thursday, July 15 – 18 from 8:00 AM to 5:00 PM. A representative from the AAAI will be on duty during these hours to assist the members of the press and media.

PRESS CONFERENCE

The AAAI Press Conference will be held Tuesday, July 16 at 11:00 AM in the Anaheim Hilton in Capistrano Room A, Concourse Level. A press lunch, hosted by Digital Equipment Corporation, will be held at 12:00 pm in Capistrano Room B.

PRINTED MATERIALS

Display tables for the distribution of promotional and informational materials of interest to conference attendees will be located in the California Room, Anaheim Convention Center.

PROCEEDINGS

Each registrant for the AAAI-91 technical program and/or IAAI-91 will receive a ticket in the registration packet for one copy of the appropriate conference proceedings. The ticket may be redeemed at the MIT Press Proceedings Distribution counter, located in the California Room, Anaheim Convention Center during registration hours, or at the AAAI Press/The MIT Press Booth #372, located in Hall B during exhibit hours. Proceedings may also be redeemed by mailing the ticket with your name and address to The MIT Press, 55 Hayward, Cambridge, MA 02142. Extra proceedings may also be purchased at the Proceedings Distribution Counter in the California Room.

Thursday, July 18, will be the **last da**y to purchase extra copies of the AAAI-91 Proceedings or IAAI 3 book at the conference site.

RECORDING

No audio or video recording is allowed in the TUTORIALS or IAAI-91 Tapes of the plenary addresses, invited talks, and AI-on-Line sessions will be for sale in the California Room, Anaheim Convention Center. A representative from First Tape Inc. will be available to take your order during registration hours, beginning Tuesday July 16. Order forms are included with your registration packet. Tapes may also be ordered by mail from First Tape Inc., 730 North LaSalle Street, Suite 200, Chicago, IL 60610.

REGISTRATION

Conference registration will be located in the California Room, Anaheim Convention Center. Registration hours will be Sunday through Thursday, July 14 –18, from 7:30 AM – 6:00 PM. Checks drawn on US banks, VISA, MasterCard, American Express, government purchase orders, travelers' checks, and US currency will be accepted. We cannot accept foreign currency or checks drawn on foreign banks.

6 General Information & Special Meetings

SPEAKER READY ROOMS

Speaker Ready Rooms will be available in all three conference sites in the following locations:

Tutorials & AI-on-Line

Anaheim Convention Center, Room A14/15

Invited Talks & Workshops

Anaheim Hilton, Room 13, Mezzanine Level

AAAI-91 Forums & IAAI–91

Anaheim Marriott, Orange County Ballroom 1

These rooms will have audio-visual equipment to assist speakers with their preparations. It is important that speakers utilize these rooms to organize their materials. The rooms will be open during the following hours: 8:00 AM – 5:00 PM, Sunday through Thursday, July 14-18; and 8:00 AM – 10:30 AM on Friday, July 19.

Invited speakers and IAAI-91 speakers are asked to come to their respective speaker ready rooms **one day prior** to their speech. An audio-visual team will be there to assist you.

T-SHIRT SALES

AAAI-91/IAAI-91 T-shirts will be for sale in the California Room, Anaheim Convention Center, during registration hours. Supplies are limited.

TELEPHONES

Public telephones are located in the main lobbies of each conference site. Telephones are also located near the meeting rooms in the Anaheim Hilton and the Anaheim Marriott, and in Exhibit Hall B, Anaheim Convention Center.

TOURS

Tours of the Jet Propulsion Laboratory, University of California, Irvine Artificial Intelligence Laboratory, and Rockwell International will be held Thursday, July 18. At the time of printing, the JPL tour is sold out. For further information regarding availability of the other tours, please contact the Registrar in Onsite Registration, California Room, Anaheim Convention Center. Transportation is provided.

TRANSPORTATION

A representative from Custom Travel Consultants, the AAAI preferred travel agent, will be available to assist with your travel plans at the Travel Desk in the California Room, Anaheim Convention Center on Tuesday and Thursday, July 16 and 18 only.

AIR

United Airlines has been selected as the official carrier for AAAI-91/IAAI-91. If you wish to change your reservation, you may call United directly at 800/521-4041. Please give the special discount code: **430TK.**

AIRPORT CONNECTIONS

Several companies provide service from the Los Angeles International (LAX and John Wayne-Orange County (SNA) Airports to the Anaheim Area. Please check with the Travel Desk in the California Room, Anaheim Convention Center for schedules and fares.

TUTORIAL SYLLABI

Tutorial Syllabi distribution is limited to tutorial attendees only. Syllabi will not be sold after the tutorials.

VOLUNTEERS

Volunteer Headquarters, located in Room A11/12, Anaheim Convention Center, will be open Saturday, July 13, through Thursday, July 18, from 8:30 AM – 5:30 pm. The Volunteer Meeting will be held Saturday, July 13 at 5:00 pm in room A4/5, Anaheim Convention Center.

SPECIAL MEETINGS

AAAI Annual Business Meeting

The Annual Business Meeting will be held Wednesday, July 17, from 12:50 – 1:20 PM in Marriott Hall Center, Anaheim Marriott.

AAAI Conference Committee Meeting

The AAAI Conference Committee breakfast meeting will be held Thursday, July 18, from 7:30 – 9:00 AM in the Desert Springs Room, Lower Level, Anaheim Marriott.

AAAI Executive Council Meeting

The AAAI Executive Council Meeting will be held Sunday, July 14.

AAAI Exhibitor's Advisory Committee Meeting

The AAAI Exhibitor's Advisory Committee Meeting will be held on Wednesday, July 17, at 8:30 AM in Orange County Ballroom 3, Anaheim Marriott.

AAAI Press and Publications Committee Meeting

The AAAI Press/Publications Committee breakfast meeting will be held Tuesday, July 16, from 7:30 – 9:00 AM in Palos Verdes AB, Concourse Level, Anaheim Hilton.

AAAI Symposium Committee Meeting

The AAAI Symposium Committee Meeting will be held Wednesday, July 17, from 8:00 – 9:00 AM in A2/3, Anaheim Convention Center.

AI and the Law Subgroup Meeting

The AI in Law Subgroup Meeting will be held Tuesday, July 16, from 12:50 – 1:30 PM in A6, Anaheim Convention Center.

AI in Manufacturing Subgroup Meeting

The AI in Manufacturing Subgroup Meeting will be held Thursday, July 18, from 12:50 – 1:30 PM in A6, Anaheim Convention Center.

AI in Medicine Subgroup Meeting

The AIM Subgroup Meeting will be held Tuesday, July 16, from 7:30 – 9:00 AM in A7, Anaheim Convention Center.
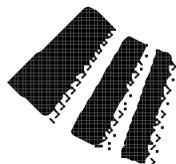
AI Journal Editorial Board Meeting

The *Artificial Intelligence Journal* Editorial Board luncheon meeting will be held Tuesday, July 16, in Huntington ABC, Concourse Level, Anaheim Hilton. Lunch will be served at 12:30 PM, followed by the meeting at 12:50 PM.

CSCSI Annual Meeting

The CSCSI Annual Meeting will be held Thursday, July 18, from 12:50 – 1:30 PM in A4/5, Anaheim Convention Center.

Press Conference and Lunch

The AAAI Press Conference will be held Tuesday, July 16, at 11:00 AM in Capistrano B, Concourse Level, Anaheim Hilton. A lunch will follow in Capistrano A.

SIGART Meeting

The SIGART Meeting will be held Wednesday, July 17, from 12:50 – 1:30 pm in Room A7, Anaheim Convention Center.

AAAI 1991 ELECTED FELLOWS

Robert C. Boyer, *University of Texas at Austin*
Jaime Carbonell, *Carnegie Mellon University*
Alain Colmerauer, *University of Marseille*
B. Chandrasekaran, *Ohio State University*
Jon Doyle, *Massachusetts Institute of Technology*
Mark S. Fox, *Carnegie Mellon University*
Barbara Hayes-Roth, *Stanford University*
Elaine Kant, *Schlumberger Laboratory for Computer Science*
Robert A. Kowalski, *Imperial College of Science and Technology*
Wendy G. Lehnert, *University of Mass.*
Vladimir Lifschitz, *University of Texas at Austin*
J. Strouther Moore, *Computer Logic Inc.*
Robert C. Moore, *SRI International*
Fernando C. N. Pereira, *AT&T Bell Laboratories*
Elaine Rich, *Microelectronics Computer Consortium*
Edwina L. Rissland, *University of Massachusetts*
Oliver G. Selfridge, *CTE Laboratories*
Candace L. Sidner, *Digital Equipment Corporation*
Aaron Sloman, *University of Sussex*
Richard J. Waldinger, *SRI International*
Robert Wilensky, *University of California at Berkeley*
Yorick A. Wilks, *New Mexico State University*
Lotfi A. Zadeh, *University of California at*

PROGRAM SCHEDULE

7:30 AM – 6:00 PM
Conference Registration
California Room, ACC

8:00 AM – 6:30 PM
KiddieCorp
Los Angeles/La Jolla, Marriott

8:30 AM – 5:00 PM
AAAI Executive Council Meeting

TUTORIAL PROGRAM

Anaheim Convention Center

ET/Emerging Technologies, IA/Industrial Applications, PI/Practical Issues

9:00 AM – 1:00 PM
Sunday Morning Tutorials

PACIFIC 1
SA1: AI in Business, Finance, and Accounting (IA)
Paul R. Watkins

PACIFIC 3
SA2: Artificial Intelligence and Engineering Design (IA)
D. Sriram and Chris Tong

PACIFIC 4
SA3: Architectures for Embedded AI Applications (PI)
Simran Singh Khalsa and Earl Sacerdoti

SANTA ANA A9/10
SA4: Knowledge Acquisition Techniques (PI)
Carli Scott and Jan Clayton

PACIFIC 2
SA5: Model-Based Diagnosis (IA)
Olivier Raiman and Mark Shirley

1:00 – 2:00 PM
Lunch

2:00 – 6:00 PM
Sunday Afternoon Tutorials

PACIFIC 1
SP1: Machine Learning and Its Role in KB Systems (ET)
Jaime Carbonell and Yves Kodratoff

PACIFIC 3
SP2: Neural Networks for Real World Problems (ET)
Geoffrey Hinton and David Touretzky

SANTA ANA A9/10
SP3: Object-Oriented Programming and Expert Systems (PI)
Jan Aikins and Paul Harmon

PACIFIC 4
SP4: Tools for Knowledge Acquisition (PI)
Tom Gruber and Mark Musen

PACIFIC 2
SP5: Using AI for Business Transformation (Realizing the Potential of AI in Business) (PI)
Donald Mick and Grady McGonagill

WORKSHOP PROGRAM

Anaheim Hilton

PALOS VERDES B
AI in Natural and Agricultural Resource Management

SAN SIMEON B
Blackboard Systems

AVILA A
Comparative Analysis of Explanation Planning Architectures

PALOS VERDES A
Creativity: Models, Methods, and Tools

CAPISTRANO A/B
Design Principles for Real-Time Knowledge Based Control Systems

SAN SIMEON A
Knowledge Discovery in Data Bases (Part I)

LAGUNA A/B
Model-Based Reasoning

AVILA B
Standards in Expert Systems
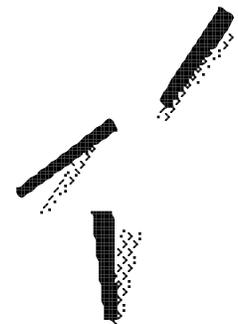
7:30 AM – 6:00 PM
Conference Registration
California Room, ACC

8:00 AM – 6:30 PM
KiddieCorp
Los Angeles/La Jolla, Marriott

TUTORIAL PROGRAM

Anaheim Convention Center

ET/Emerging Technologies, IA/Industrial Applications, PI/Practical Issues

9:00 AM – 1:00 PM
Monday Morning Tutorials

PACIFIC ROOM 1
MA1: Introduction to Genetic Algorithms (ET)
John Grefenstette and Lawrence Davis

SANTA ANA ROOM A9/10
MA2: Knowledge-Based Scheduling (IA)
Mark Fox and Monte Zweben

PACIFIC ROOM 2
MA3: Mobile Robot Navigation (IA)
David P. Miller and Marc G. Slack

PACIFIC ROOM 3
MA4: The Craft of Exploiting AI Techniques in Human Interface Design (PI)
Jim Hollan and Mike Williams

PACIFIC ROOM 4
MA5: Truth Maintenance Systems (ET)
Johan de Kleer and Ken Forbus

1:00 – 2:00 PM
Lunch

2:00 – 6:00 PM
Monday Afternoon Tutorials

PACIFIC ROOM 3
MP1: Case-Based Resoning (ET)
Kevin D. Ashley and Katia P. Sycara

PACIFIC ROOM 1
MP2: Distributed Artificial Intelligence
Les Gasser and Jeffrey S. Rosenschein

SANTA ANA ROOM A9/10
MP3: Integrating Expert Systems and Neural Networks (ET)
Larry R. Medsker and David L. Bailey

PACIFIC ROOM 4
MP4: Planning: From Prediction to Reaction (IA)
Mark Drummond and Steve Minton

PACIFIC ROOM 2
MP5: Verification and Validation (PI)
Kirstie L. Bellman and Daniel E. O'Leary

IAAI-91 PROGRAM

Grand Ballroom, Anaheim Marriott

8:20 – 9:00 AM
Opening Remarks
Reid Smith, Program Chair
Schlumberger Laboratory
for Computer Science

Finance and Banking

9:00 – 9:40 AM
The Credit Clearing House Expert System
Roger Jambor, Sylvia Jow, and Dan Meder, Dun & Bradstreet Corporation; Philip Klahr, Inference Corporation

9:40 – 10:20 AM
CUBUS—An Assistant for Fundamental Corporate Analysis
Michael F. Wolf, Dieter Wenger, and Klaus Kirchmayr, Swiss Bank Corporation

10:20 – 10:40 AM
Break

10:40 – 11:20 AM
AL2X: An Expert System for Off-Site Evaluation of Commercial Bank Financial Stability
John R. Segerstrom, AL2X Development Corporation

11:20 AM – 12:00 PM
AES: SunAmerica's Appointment Expert System
Richard Levine, RSL Business Solutions; Frank Angrisani, SunAmerica Financial; Gary MacKinnon and Lew Roth, Inference Corporation

12:00 – 1:30 PM
Lunch Break

Airlines and Scheduling

1:30 – 2:10 PM
Meeting a Competitive Challenge in the Frequent Flyer Competition
Brian Ebersold, American Airlines, Inc.

2:10 – 2:50 PM
An Expert Auditing System for Airline Passenger Tickets
Andrew J. Valles, Northwest Airlines; Joseph A. VanLoy, Andersen Consulting

2:50 – 3:10 PM
Break

3:10 – 3:50 PM
MOCA—A Knowledge-Based System for Airline Maintenance Scheduling
Scott Smits, American Airlines; Dave Pracht, Inference Corporation

3:50 – 4:30 PM
The Development of SYLLABUS—An Interactive, Constraint-Based Scheduler for Schools and Colleges
Rick Evertz, Scientia, Ltd

4:30 – 5:10 PM
Panel—Retrospective Views of Previous IAAI Applications
Earl Sacerdoti, The Copernican Group

5:10 – 5:20 PM
IAAI Outstanding Contribution Award
Dennis O'Connor, Digital Equipment Corporation
Presented by Daniel G. Bobrow, President, AAAI

5:20 – 6:30 PM
Poster Session/Reception

WORKSHOP PROGRAM

Anaheim Hilton

CARMEL
AI in Geotechnical Engineering Applications

CAPISTRANO A/B
Automating Software Design: Interactive Design

PALOS VERDES B
Cooperation Among Heterogeneous Intelligent Systems

LAGUNA A/B
Intelligent Multimedia Interfaces

AVILA B
Knowledge Acquisition: From Science to Technology to Tools

SAN SIMEON A
Knowledge Discovery in Data Bases (Part II)

SAN SIMEON B
Natural Language Text Retrieval

PALO VERDES A
Object-Oriented Programming in AI

AVILA A
Towards Domain-Independent Strategies for Abduction

TUESDAY, JULY 16

7:30 AM – 6:00 PM
Conference Registration
California Room, ACC

12:00 – 6:00 PM
AAAI-91/IAAI Joint Exhibition
Exhibit Hall B, ACC

8:00 AM – 7:30 PM
KiddieCorp
Los Angeles/La Jolla, Marriott

6:30 – 8:30 PM
AAAI-91 Opening Reception
California Pavilion, Hilton

SPECIAL MEETINGS

7:30 – 9:00 AM
AAAI Press/Publications Committee Meeting
Palos Verdes A/B, Hilton

12:50 – 1:30 PM
AI and the Law Subgroup Meeting
Garden Grove A6, ACC

12:50 – 1:30 PM
AI in Medicine Subgroup Meeting
Garden Grove A7, ACC

12:30 PM, LUNCH; 12:50 PM, MEETING
AI Journal Editorial Board Meeting
Huntington ABC, Hilton

11:00 AM
Press Conference and Lunch
Capistrano A/B, Hilton

PLENARY ADDRESS

Pacific Ballroom, Anaheim Hilton

8:30 AM – 10:30 AM
Introduction
Daniel G. Bobrow, President, AAAI

Themes and Directions of Artificial Intelligence: Opportunities and Challenges
Saul Amarel, Rutgers University

INVITED TALKS

Pacific Ballroom, Anaheim Hilton

11:00 AM – 12:20 PM
Descriptional Complexity and Its Application to Machine Learning, Computer Vision, and Reasoning about Uncertainty
Edwin P.D. Pednault,
AT&T Bell Laboratories

   Descriptional complexity is an expanding area of study that cuts across many disciplines, including machine learning, computer vision, pattern recognition, computational complexity, cryptography, information theory, probabilistic theory, and statistics. This area is primarily concerned with the properties of the shortest description for a collection of data in a given language (i.e., minimal encodings). Remarkably, problems in many disciplines can be formulated and solved in these terms. In particular, within artificial intelligence, aspects of inductive inference, scene analysis, classification, and similar forms of reasoning can be approached by finding short descriptions in suitable languages. These and other uses of descriptional complexity in AI will be considered in this talk. Some of the main concepts and results will be presented, along with a survey of recent AI applications. Potential applications will also be discussed to illustrate possible directions for future research.

12:20 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Machine Learning: Issues, Answers, and Quandaries
Tom Dietterich, Oregon State University

3:20 – 4:00 PM
Break

4:00 – 5:20 PM
Robot Planning
Drew McDermott, Yale University

AAAI-91 TECHNICAL FORUMS

Marriott Hall, Anaheim Marriott

10:55 AM – 6:00 PM

FORUM: COMMUNICATION AND COOPERATION

Marriott Hall South, Anaheim Marriott

10:55 – 11:00 AM
Introduction
Beverly Woolf

11:00 AM – 12:30 PM
Session: Education
Session Chair: Beverly Woolf

11:00 – 11:20 AM
Student Modelling with Confluences
Daniel Baril, Jim E. Greer, and Gordon I. McCalla, University of Saskatchewan

11:20 – 11:40 AM
FITS: A Fraction Intelligent Tutoring System
Hyacinth S. Nwana, University of Liverpool

11:40 AM – 12:00 PM
Teaching Diagnostic Skills Using AI: An Architecture Suitable for Students and Teachers
Joël Courtois, Institut Supérieur d'Electronique de Paris and Université PARIS VI

12:00 – 12:30 PM
Meet-the-Author

12:30 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: User Interfaces
Session Chair: Johanna Moore

2:00 – 2:20 PM
Planning Multimedia Explanations Using Communicative Acts
Mark T. Maybury, The MITRE Corporation

2:20 – 2:40 PM
Making Design Objects Relevant to the Task at Hand
Gerhard Fischer, University of Colorado; and Kumiyo Nakakoji, University of Colorado and Software Research Associates, Inc.

2:40 – 3:00 PM
A Tool for Achieving Consensus in Knowledge Representation
Loren G. Terveen, AT&T Bell Laboratories and David A. Wroblewski, US West Advanced Technologies

3:00 – 3:20 PM
PICTION: A System That Uses Captions to Label Human Faces in Newspaper Photographs
Rohini K. Srihari, State University of New York at Buffalo

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
Session: Generation and Interaction
Session Chair: Paul Jacobs

4:00 – 4:20 PM
Generating Interactive Explanations
Alison Cawsey, University of Cambridge

4:20 – 4:40 PM
*Automatic Generation of
Formatted Text*
Eduard H. Hovy and Yigal Arens,
USC-Information Sciences Institute

4:40 – 5:00 PM
*Generating Adjectives to Express the
Speaker's Argumentative Intent*
Michael Elhadad, Columbia University

5:00 – 5:20 PM
Interpreting Prepositions Physically
J. K. Kalita, University of Colorado; and
N. I. Badler, University of Pennsylvania

5:20 – 6:00 PM
Meet-the-Author

FORUM: FORMAL METHODS IN KNOWLEDGE REPRESENTATION

Marriott Hall North, Anaheim Marriott

10:55 – 11:00 AM
Introduction
Yoav Shoham

11:00 AM – 12:20 PM
Session: Time and Action
Session Chair: Yoav Shoham

11:00 – 11:20 AM
A Logic of Situated Know-How
Munindar P. Singh, University of Texas

11:20 – 11:40 AM
*Provably Correct Theories of
Action (Preliminary Report)*
Fangzhen Lin and Yoav Shoham,
Stanford University

11:40 AM – 12:00 PM
*A Critique of Yoav Shoham's
Theory of Causal Reasoning*
Antony Galton, University of Exeter

12:00 – 12:20 PM
*A Logic and Time Nets for
Probabilistic Inference*
Keiji Kanazawa, Brown University

12:20 – 12:50 PM
Meet-the-Author

12:50 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Nonmonotonic Reasoning I
Session Chair: Kurt Konolige

2:00 – 2:20 PM
*The P-Systems: A Systematic Classifica-
tion of Logics of Nonmonotonicity*
Wolfgang Nejdl, Technical University
of Vienna

2:20 – 2:40 PM
Some Variations on Default Logic
Piotr Rychlik, Polish Academy of Sciences

2:40 – 3:00 PM
*Default Logic, Propositional Logic,
and Constraints*
Rachel Ben-Eliyahu, University of
California, Los Angeles; and Rina Dechter,
University of California, Irvine

3:00 – 3:20 PM
Strong Introspection
Michael Gelfond, University of Texas at
El Paso

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
Session: Nonmonotonic Reasoning II
Session Chair: Fahiem Bacchus

4:00 – 4:20 PM
Default Reasoning From Statistics
Fahiem Bacchus, University of Waterloo

4:20 – 4:40 PM
*System-Z+: A Formalism for Reasoning
with Variable-Strength Defaults*
Moisés Goldszmidt and Judea Pearl,
University of California, Los Angeles

4:40 – 5:00 PM
*Incorporating Nonmonotonic
Reasoning in Horn Clause Theories*
James P. Delgrande, Simon Fraser University

5:00 – 5:20 PM
*Step-Logic and the
Three-Wise-Men Problem*
Jennifer J. Elgot-Drapkin, Arizona State
University

5:20 – 6:00 PM
Meet-the-Author
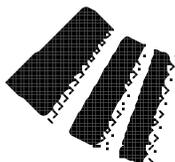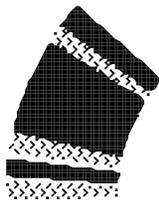
FORUM: REASONING ABOUT PHYSICAL SYSTEMS

Marriott Hall Center, Anaheim Marriott

10:55 – 11:00 AM
Introduction
Brian Williams

11:00 AM – 12:20 PM
Session: Qualitative Analysis
Session Chair: Brian Williams

11:00 – 11:20 AM
***Automated Phase Portrait Analysis
by Integrating Qualitative and
Quantitative Analysis***
Toyoaki Nishida, Kenji Mizutani, Atsushi
Kubota, and Shuji Doshita, Kyoto University

11:20 – 11:40 AM
***Qualitative Analysis of
Causal Feedback***
Philippe Rose and Mark A. Kramer,
Massachusetts Institute of Technology

11:40 AM – 12:00 PM
***The Qualitative Difference
Resolution Rule***
Tom Bylander, The Ohio State University

12:00 – 12:20 PM
***Analytic Solution of Qualitative
Differential Equations***
Philip Schaefer, Martin Marietta Advanced
Computing Technology

12:20 – 12:50 PM
Meet-the-Author

12:50 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Diagnosis
Session Chair: Tom Bylander

2:00 – 2:20 PM
***Model-Based Reconfiguration:
Toward an Integration with Diagnosis***
Judith Crow and John Rushby,
SRI International

2:20 – 2:40 PM
Focusing on Probable Diagnoses
Johan de Kleer, Xerox Palo Alto
Research Center

2:40 – 3:00 PM
Characterizing Non-Intermittent Faults
Olivier Raiman, Johan de Kleer,
Vijay Saraswat, and Mark Shirley,
Xerox Palo Alto Research Center

3:00 – 3:20 PM
***Domain Structure and the Complexity
of Diagnostic Problem Solving***
Thomas D. Wu, Massachusetts Institute of
Technology

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
**Session: Aggregation and
Geometric Reasoning**
Session Chair: Brian Falkenhainer

4:00 – 4:20 PM
***Behavioral Aggregation Within
Complex Situations: A Case Study
Involving Dynamic Equilibria***
Shankar A. Rajamoney and Sang Hoe Koo,
University of Southern California

4:20 – 4:40 PM
***Structural Aggregation in
Common-Sense Reasoning***
Zheng-Yang Liu, EDS Research, Austin
Lab and Arthur M. Farley,
University of Oregon

4:40 – 5:00 PM
Geometric Reasoning for Shape Design
George Turkiyyah and Omar Ghattas,
Carnegie Mellon University

5:00 – 5:20 PM
***The Use of Intelligently Controlled
Simulation to Predict a
Machine's Long-Term Behavior***
Andrew Gelsey, Rutgers University

5:20 – 5:40 PM
***Incremental Configuration Space
Construction for Mechanism Analysis***
Leo Joskowicz, IBM T. J. Watson Research
Center; and Elisha Sacks,
Princeton University

5:40 – 6:00
Meet-the-Author

WORKSHOP PROGRAM

Anaheim Hilton

SAN SIMEON A
***AI Approaches to Classification and
Pattern Recognition in Molecular***

SAN SIMEON B
AI in Business

AVILA B
***Knowledge-Based Construction of Prob-
abilistic and Decision Models***

IAAI-91 PROGRAM

Grand Ballroom, Anaheim Marriott

Engineering and Manufacturing

1:30 – 2:10 PM
***QDES: Quality Design Expert System
of Steel Products***
Yoshiteru Iwata and Norio Obama,
Nippon Steel Corporation

2:10 – 2:50 PM
***Intelligent Decision Support for
Assembly System Design***
J. A. Hernandez, Coopers & Lybrand;
D. E. Whitney, S. C. Luby, R. E.
Gustavson, H. W. Leung, P. M. Hutchins,
T. L. De Fazio, J. L. Nevins, A. C. Edsall,
R. W. Metzinger and K. K. Tung,
The Charles Stark Draper Laboratory;
T. J. Peters, University of Connecticut

2:50 – 3:10 PM
Break

3:10 – 3:50 PM
***Putting Knowledge-Based Concepts
to Work for Mechanical Design***
Ian C. Campbell, Krys J. Luczynski and
Steve K. Hood, Lamb Group of Companies

3:50 – 4:30 PM
***A Case-Based Reasoning Solution to the
Problem of Redundant Resolutions
of Nonconformances in
Large-Scale Manufacturing***
Stuart J. Brown and Lundy M. Lewis,
General Dynamics Electric Boat Division

4:30 – 5:30 PM
Poster Session

AI-ON-LINE PROGRAM

*Anaheim Room, Anaheim Convention
Center*

2:00 – 4:00 PM
***Integrating Advanced AI Technologies
into the Commercial Marketplace: Neu-
ral Networks and Expert Systems***
Organized by Gensym and Neuralware
     Moderator: Kalev Ruberg, IBM Canada
     Panelists: Duncan Rowan, DuPont;
Samuel Sellam, Inrets (France);
Troy Heindel, NASA Johnson Space Cen-
ter; Jeff Lin, Texaco, Inc.

7:30 AM – 6:00 PM
Conference Registration
California Room, ACC

10:00 AM – 6:00 PM
AAAI-91/IAAI-91 Joint Exhibition
South Exhibition Hall, ACC

8:00 AM – 6:00 PM
KiddieCorp
Los Angeles/La Jolla, Anaheim Marriott

Specia6l Meetings

12:50 – 1:20 PM
AAAI Annual Business Meeting
Marriott Hall Center, Anaheim Marriott

8:30 AM
AAAI Exhibitor's Advisory Meeting
Orange County Ballroom 3,
Anaheim Marriott

8:00 – 9:00 AM
AAAI Symposium Committee Meeting
Fullerton A/B, Anaheim Convention Center

12:50 – 1:30 PM
SIGART Meeting
Garden Grove A7, Anaheim Convention
Center

INIVITED TALKS/PANELS

Pacific Ballroom, Anaheim Hilton

8:30 – 10:00 AM
From LP to LP: A Constraints Programming Paradigm
Jean-Louis Lassez, IBM T.J. Watson Research Center

10:00 – 10:30 AM
Break

10:30 AM – 12:00 PM
Panel: Knowledge Representation: Broadening the Perspective
Moderator: Howard E. Shrobe, MIT and Symbolics, Inc.
   Panelists: Randall Davis, Massachusetts Institute of Technology; Brian Williams, William Woods

12:30 – 2:00 PM
Lunch

2:00 – 3:30 PM
Approximate Reasoning Systems: A Personal Perspective
Piero P. Bonissone, General Electric Corporate R & D

3:30 – 4:00 PM
Break

4:00 – 5:30 PM
Modelling Situated Cognition
James Greeno, Stanford University and the Institute for Research on Learning

   AI methods of symbolic computation have provided calculi for cognitive modelling, enabling rigorous formulation of hypotheses about knowledge and cognitive processes. At present, some theorists are challenging assumptions of mental representation that have framed the main development of information-processing psychology. The alternate view is that cognition should be viewed as interaction between agents and the environment, rather than operations on symbols in mental representations. With Joyce Moore, I am exploring a possibility that symbolic computation is an appropriate formalism for expressing hypotheses in this new framework, with a shift in the interpretation of formulas as describing agent-environment interactions rather than as corresponding to mental representations. We interpret symbolic expressions as descriptions of states of affairs, in the sense of situation theory, that are changed by processes that we interpret as descriptions of agent-environment interactions. We distinguish a subset of states of affairs as being registered, corresponding to information that does have cognitive representations, and that enter into processes of situated reasoning. I will report our current state of progress.

FORUM: COMMUNICATION AND COOPERATION

Marriott Hall South

8:25 – 8:30 AM
Introduction
Graeme Hirst

8:30 – 9:50 AM
Session: Syntax and Semantics I
Session Chair: Graeme Hirst

8:30 – 8:50 AM
Semantics-First Natural Language Processing
Steven L. Lytinen, The University of Michigan

8:50 – 9:10 AM
A Cognitively Plausible Approach to Understanding Complex Syntax
Claire Cardie and Wendy Lehnert,
University of Massachusetts

9:10 – 9:30 AM
From Syntax to Meaning in Natural Language Processing
Alexander G. Hauptmann,
Carnegie Mellon University

9:30 – 9:50 AM
Tense Interpretation in the Context of Narrative
Fei Song and Robin Cohen, Univ. of Waterloo

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:50 AM
Session: Syntax and Semantics II
Session Chair: Eduard Hovy

10:30 – 10:50 AM
ULINK: A Semantics-Driven Approach to Understanding Ungrammatical Input
Jeffrey D. Kirtner and Steven L. Lytinen,
The University of Michigan

10:50 – 11:10 AM
A Tabular Method for Island-Driven Context-Free Grammar Parsing
Giorgio Satta and Oliviero Stock, Istituto per la Ricerca Scientifica e Tecnologica

11:10 – 11:30 AM
High Performance Memory-Based Translation on IXM2 Massively Parallel Associative Memory Processor
Hiroaki Kitano, Carnegie Mellon University and NEC Corporation; and Tetsuya Higuchi, Electrotechnical Laboratory

11:30 – 11:50 AM
Disambiguation of Prepositional Phrases in Automatically Labelled Technical Text
Lois Boggess, Rajeev Agarwal, and Ron Davis, Mississippi State University
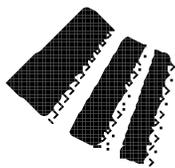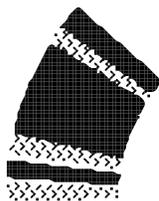
11:50 AM – 12:30 PM
Meet-the-Author

12:30 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Formalisms for Coordination
Session Chair: Les Gasser

2:00 – 2:20 PM
A Probabilistic Model of Plan Recognition
Eugene Charniak, Brown University; and
Robert Goldman, Tulane University

2:20 – 2:40 PM
*The Utility of Communication in
Coordinating Intelligent Agents*
Piotr J. Gmytrasiewicz, Edmund H. Durfee,
and David K. Wehe, University of Mich.

2:40 – 3:00 PM
*The Clarke Tax as a Consensus
Mechanism Among Automated Agents*
Eithan Ephrati and Jeffrey S. Rosenschein,
Hebrew University

3:00 – 3:20 PM
*The Function of Time in Cooperative
Negotiations*
Sarit Kraus, Hebrew University; and
Jonathan Wilkenfeld, University of Maryland

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
Session: Multiagent Architectures
Session Chair: Lee Erman

4:00 – 4:20 PM
*A Dynamic Organizational Architec-
ture for Adaptive Problem Solving*
Les Gasser, University of Southern Califor-
nia; Toru Ishida, NTT Communications and
Information Processing Laboratories

4:20 – 4:40 PM
*Sophisticated Cooperation in FA/C
Distributed Problem Solving Systems*
Norman Carver, Zarko Cvetanovic, and
Victor Lesser, University of Massachusetts

4:40 – 5:00 PM
*Combining Specialized Reasoners and
General Purpose Planners: A Case Study*
Subbarao Kambhampati, Mark Cutkosky,
Marty Tenenbaum, and Soo Hong Lee,
Stanford University

5:00 – 5:20 PM
*Toward an Intelligent Agent
Framework for Enterprise Integration*
Jeff Y-C Pan and Jay M. Tenenbaum, En-
terprise Integration Technologies Corpora-
tion and Stanford University

5:20 – 6:00 PM
Meet-the-Author

FORUM: LEARNING

Marriott Hall Center, Anaheim Marriott

8:25 – 8:30 AM
Introduction
Doug Fisher

8:30 – 9:50 AM
Session: Learning Search Control
Session Chair: Doug Fisher

8:30 – 8:50 AM
*Synthesizing UNIX Shell Scripts
Using Derivational Analogy:
An Empirical Assessment*
Sanjay Bhansali and Mehdi T. Harandi,
University of Illinois at Urbana-Champaign

8:50 – 9:10 AM
*SteppingStone: An Empirical and
Analytical Evaluation*
David Ruby and Dennis Kibler,
University of California, Irvine

9:10 – 9:30 AM
*STATIC: A Problem-Space Compiler
for PRODIGY*
Oren Etzioni, University of Washington

9:30 – 9:50 AM
*Integrating Abstraction and Explana-
tion-Based Learning in PRODIGY*
Craig A. Knoblock, Carnegie Mellon
University; Steven Minton, Sterling Federal
Systems, NASA Ames Research Center;
and Oren Etzioni, University of Washington

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:50 AM
Session: Learning Theory and MDL
Session Chair: Devika Subramanian

10:30 – 10:50 AM
*Learning with Many Irrelevant
Features*
Hussein Almuallim and Thomas G.
Dietterich, Oregon State University

10:50 – 11:10 AM
*Analyses of Instance-Based
Learning Algorithms*
Marc K. Albert, University of California,
Irvine; and David W. Aha, Turing Institute

11:10 – 11:30 AM
Regularity and Structure
Alexander Botta, New York University

11:30 – 11:50 AM
*A Minimal Encoding Approach to
Feature Discovery*
Mark Derthick, MCC

11:50 AM – 12:30 PM
Meet-the-Author

12:30 – 2:00 PM
Lunch Break

12:50 - 1:20 PM
AAAI Annual Business Meeting

2:00 – 3:20 PM
Session: Learning Connectionist Representations
Session Chair: Jude Shavlik

2:00 – 2:20 PM
*Error-Correcting Output Codes:
A General Method for Improving
Multiclass Inductive Learning Programs*
Thomas G. Dietterich and Ghulum Bakiri,
Oregon State University

2:20 – 2:40 PM
*Analysis of the Internal Representations in
Neural Networks for Machine Intelligence*
Lai-Wan Chan, The Chinese University of
Hong Kong

2:40 – 3:00 PM
*Direct Transfer of Learned Information
Among Neural Networks*
Lorien Y. Pratt and Jack Mostow, Rutgers
University; Candace A. Kamm, Bellcore

3:00 – 3:20 PM
*Rule Learning by Searching
on Adapted Nets*
LiMin Fu, University of Florida

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
Session: Learning and Evaluation Functions
Session Chair: John Grefenstette

4:00 – 4:20 PM
*Two Kinds of Training Information
For Evaluation Function Learning*
Paul E. Utgoff and Jeffrey A. Clouse,
University of Massachusetts

4:20 – 4:40 PM
Adaptive Pattern-Oriented Chess
Robert Levinson and Richard Snyder,
University of California, Santa Cruz

4:40 – 5:00 PM
*A Complexity Analysis of Cooperative
Mechanisms in Reinforcement Learning*
Steven D. Whitehead, Univ. of Rochester

5:00 – 5:20 PM
*Constructive Induction on
Domain Information*
James P. Callan and Paul E. Utgoff,
University of Massachusetts

5:20 – 6:00 PM
Meet-the-Author

FORUM: PLANNING, PERCEPTION, AND ROBOTICS

Marriott Hall North, Anaheim Marriott

8:25 – 8:30 AM
Introduction
Reid Simmons

8:30 – 9:50 AM
Session: Mathematical Foundations of Planning
Session Chair: Reid Simmons

8:30 – 8:50 AM
On the NP-Hardness of Blocks World
Stephen V. Chenoweth, NCR Research & Development

8:50 – 9:10 AM
Complexity Results for Blocks-World Planning
Naresh Gupta and Dana S. Nau, University of Maryland

9:10 – 9:30 AM
Systematic Nonlinear Planning
David McAllester, Massachusetts Institute of Technology and David Rosenblitt, WEB Development Corporation

9:30 – 9:50 AM
An Efficient Reactive Planner for Synthesizing Reactive Plans
Patrice Godefroid and Froduald Kabanza, Université de Liège

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:50 AM
Session: Path and Assembly Planning
Session Chair: David Miller

10:30 – 10:50 AM
Dealing with Uncertainties in CAD-Based Assembly Motion Planning
S. N. Gottschlich and A. C. Kak, Purdue University

10:50 – 11:10 AM
Augmenting a Nominal Assembly Motion Plan with a Compliant Behavior
Gordon A. Dakin and Robin J. Popplestone, University of Massachusetts

11:10 – 11:30 AM
A Fast Path Planner for a Car-Like Indoor Mobile Robot
Jean-Claude Latombe, Stanford University

11:30 – 11:50 AM
Path Planning for Highly Redundant Manipulators Using a Continuous Model
Akira Hayashi and Benjamin J. Kuipers, The University of Texas at Austin

11:50 AM – 12:30 PM
Meet-the Author

12:30 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Hierarchy in Planning
Session Chair: James Firby

2:00 – 2:20 PM
A Quantitative Theory for Plan Merging
David E. Foulser, Silicon Graphics Computer Systems; Ming Li and Qiang Yang, University of Waterloo

2:20 – 2:40 PM
Explanation-Based Generalization of Partially Ordered Plans
Subbarao Kambhampati, Stanford University; and Smadar Kedar, NASA Ames Research Center

2:40 – 3:00 PM
Search Reduction in Hierarchical Problem Solving
Craig A. Knoblock, Carnegie Mellon University

3:00 – 3:20 PM
Characterizing Abstraction Hierarchies for Planning
Craig A. Knoblock, Carnegie Mellon University; Josh D. Tenenberg, University of Rochester; and Qiang Yang, University of Waterloo

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:00 PM
Session: Representation in Planning
Session Chair: Ed Pednault

4:00 – 4:20 PM
Preferential Semantics for Goals
Michael P. Wellman, Wright-Patterson AFB; and Jon Doyle, Massachusetts Institute of Technology

4:20 – 4:40 PM
AGENT0: A Simple Agent Language and Its Interpreter
Yoav Shoham, Stanford University

4:40 – 5:00 PM
Scaling Knowledge-Based Planning Technology to Meet Large Scale Real World Problems
Stephen E. Cross, Defense Advanced Research Projects Agency

5:00 – 5:40 PM
Meet-the-Author

IAAI-91 PROGRAM

Grand Ballroom, Anaheim Marriott

Government Applications

8:20 – 9:00 AM
A Knowledge-Based System to Support Nuclear Test Ban Treaty Verification
Gregory Beall and Fred Dashiell, Inference Corporation; Steven Bratt, Center for Seismic Studies; Henry Swanger, Science Applications International Corporation

9:00 – 9:40 AM
Criticism-Based Knowledge Acquisition for Document Generation
Barry G. Silverman, George Washington University

9:40 – 10:20 AM
Expert Systems in Data Processing: California Travel Expense Claim System
Allyson Bartman-Gatt, State of California—Health & Welfare Agency

10:20 – 10:40 AM
Break

Miscellaneous

10:40 – 11:20 AM
The Application of Artificial Intelligence in the Field of Chemical Regulation
Giorgio Sorani, The Lubrizol Corporation; Robert A. Lauer, Andersen Consulting

11:20 AM – 12:00 PM
Automatic Letter Composition for Customer Service
Stephen Springer, Paul Buta, and Thomas C. Wolf, Cognitive Systems, Inc.

12:00 – 1:30 PM
Lunch Break

Diagnosis

1:30 – 2:10 PM
The Thallium Diagnostic Workstation: Learning to Diagnose Heart Imagery from Examples
Rin Saunders, Analytics

2:10 – 2:50 PM
AGATHA: An Integrated Expert System to Test and Diagnose Complex Personal Computer Boards
Daryl Allred, Yossi Lichtenstein, Chris Preist, Mike Bennett, and Ajay Gupta, Hewlett Packard

2:50 – 3:10 PM
Break

Failure Analysis

3:10 – 3:50 PM
***NYNEX MAX: A Telephone
Trouble Screening Expert***
Henry Rabinowitz, Jack Flamholz,
Erica Wolin and Jim Euchner,
Nynex Science & Technology

3:50 – 4:30 PM
***CANASTA: The Crash Analysis
Troubleshooting Assistant***
Michael S. Register and Anil Rewari,
Digital Equipment Corporation

4:30 – 5:10 PM
Closing Remarks
Carli Scott, Program Cochair
Expert Support, Inc.

5:10 – 6:10 PM
Poster Session

AI-ON-LINE PROGRAM

*Anaheim Room, Anaheim Convention
Center*

10:30 AM – 12:30 PM
***Case Based Reasoning: Early Applica-
tion Examples and Commercial Potential***
Organized by Cognitive Systems and
Inference
   Moderator: Neena Buck, New Science
Associates
   Panelists: William Bain, The Boston Com-
pany; Lynden Tennison, American Airlines;
Joe Carter, Andersen Consulting; William
Mark, Lockheed; Robert Simpson, NCR

2:00 – 4:00 PM
***How to Involve Management in AI
to Assure AI Success***
Organized by Digital Equipment
   Moderator:
   Panelists: Peter Stockhausen, Ameritech;
Ron Ribitsky, Boston Children's Hospital,
Don Rasmus, Hughes Aircraft; Elizabeth
Byrnes, Manufacturer's Hanover Bank; Paul
Clancy, Metropolitan Life

WORKSHOP PROGRAM

Anaheim Convention Center

HUNTINGTON B
***Knowledge-Based Systems Verification,
Validation and Testing***

ANAHEIM CONVENTION CENTER
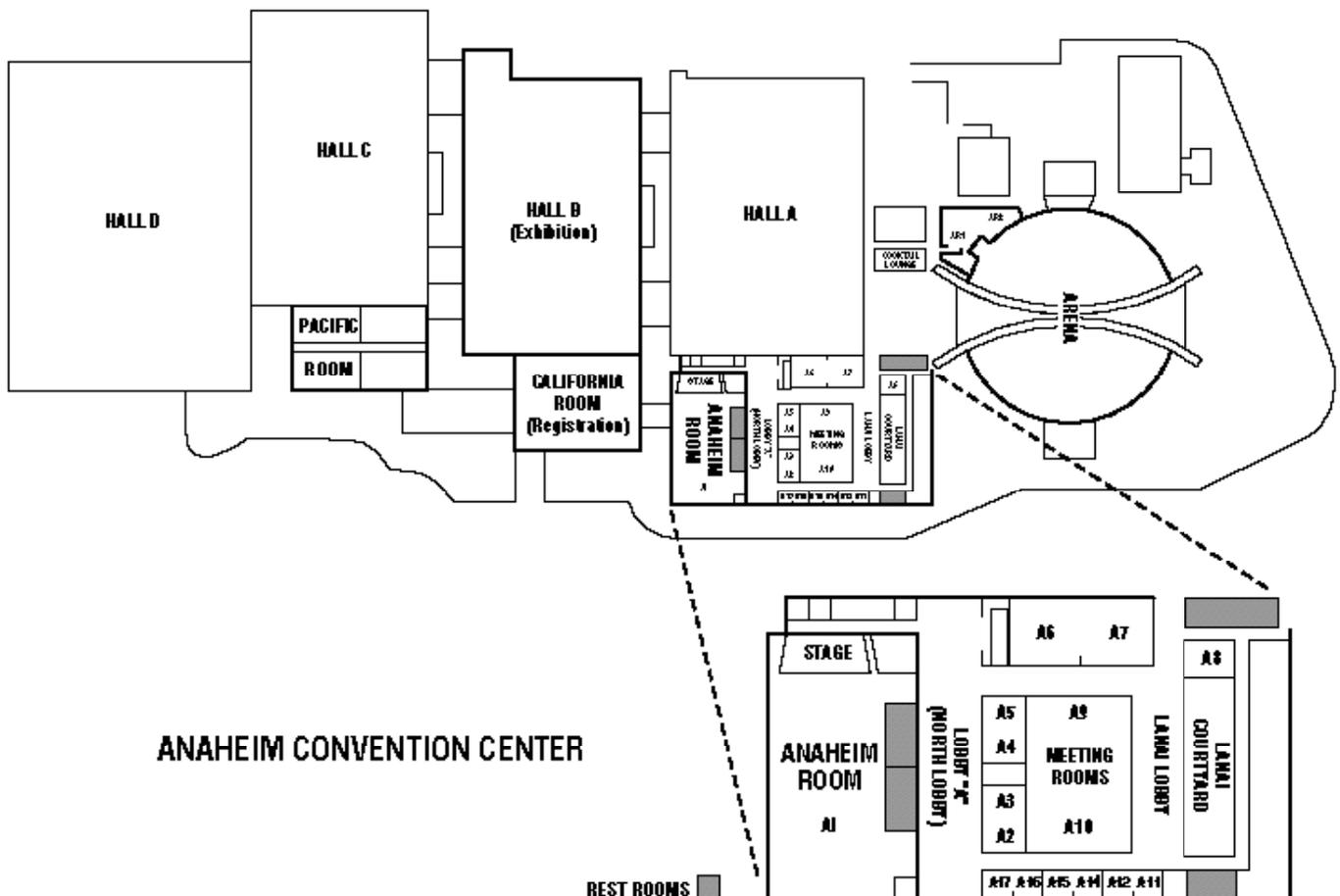
7:30 AM – 6:00 PM
Conference Registration
California Room, ACC

10:00 – 4:00 PM
AAAI-91/IAAI-91 Joint Exhibition
South Exhibition Hall, ACC

8:00 – 7:30 PM
KiddieCorp
Los Angeles/La Jolla, Anaheim Marriott

Special Meetings

7:30 – 9:00 AM
AAAI Conference Committee Meeting
Desert Springs, Anaheim Marriott

8:30 AM
AAAI Exhibitor's Space Reservation Meeting AAAI-92
Pacific Room, ACC

12:50 – 1:30 PM
AI in Manufacturing Subgroup Meeting
Garden Grove A6, ACC

12:50 – 1:30 PM
CSCSI Annual Meeting
Huntington Beach A4/5, ACC

Visit the Exhibits!

Tuesday: 12 – 6 PM
Wednesday: 10 AM – 6 PM
Thursday: 10 AM – 4PM

INVITED TALKS/PANELS

Pacific Ballroom, Anaheim Hilton

8:30 – 10:00 AM
Panel: Exploiting the Experimental Method in AI
Moderator: Marc Vilain, MITRE Corporation
   There has been much recent discussion in the AI community about the methodologies by which we conduct our research. Typically we approach our work in one of several ways that are idiosyncratic to AI—building demonstration systems or developing mathematical frameworks in particular. Of late, however, a growing number of AI researchers have come to adopt the experimental methodology that is commonplace in other scientific disciplines. There is much that is attractive about this approach, especially its potential for yielding clear and precise results. Despite this, the experimental method has not seen widespread use in our field, in part due to the perceived difficulty of adapting it to the AI endeavor.
   This panel is intended as an exploration of how some AI researchers have exploited the experimental method in their work. It will range over the experimental techniques these researchers have used, the benefits they have gained, and the liabilities they may have encured.

10:00 – 10:30
Break

10:30 AM – 12:00 PM
Agents with Attitudes
Kurt Konolige, SRI International

12:00 – 2:00 PM
Lunch Break

2:00 – 3:30 PM
Discourse and Intentions: Communicating Purpose in Language
Candy Sidner, DEC Research Laboratories

3:30 – 4:00 PM
Break

4:00 – 5:30 PM
Connectionism and Symbol Processing
David Touretzky,
Carnegie Mellon University

FORUM: CASE-BASED REASONING

Marriott Hall South, Anaheim Marriott

8:25 – 8:30
Introduction
Kris Hammond

8:30 – 9:50 AM
Session: CASE-Based Reasoning
Session Chair: Kris Hammond

8:30 – 8:50 AM
Rules and Precedents as Complementary Warrants
L. Karl Branting, University of Wyoming; and Bruce W. Porter, University of Texas at Austin

8:50 – 9:10 AM
An Indexing Vocabulary for Case-Based Explanation
David B. Leake, Indiana University

9:10 – 9:30 AM
Indexing Stories as Social Advice
Eric A. Domeshek, Institute for Learning Sciences, Northwestern University

9:30 – 9:50 AM
Improving Rule-Based Systems Through Case-Based Reasoning
Andrew R. Golding, Stanford University; and Paul S. Rosenbloom, Information Sciences Institute, University of Southern California

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:10 AM
Session: Transformation in Design
Session Chair: Chris Owens

10:30 – 10:50 AM
The Roles of Adaptation in Case-Based Design
Thomas R. Hinrichs and Janet L. Kolodner, Georgia Institute of Technology

10:50 – 11:10 AM
Prototype-Based Reasoning: An Integrated Approach to Solving Large Novel Problems
Shankar A. Rajamoney and Hee-Youn Lee, University of Southern California

FORUM: ISSUES IN AUTOMATED REASONING

Marriott Hall South, Anaheim Marriott

11:10 – 11:15 AM
Introduction
David McAllester

11:15 – 11:55 AM
Session: General Deduction Systems
Session Chair: David McAllester

11:15 – 11:35 AM
Logic Morphisms as a Framework for Backward Transfer of Lemmas and Strategies in Some Modal and Epistemic Logics
Ricardo Caferra, Stephane Demri, and Michel Herment, LIFIA-IMAG

11:35 – 11:55 AM
Mechanization of Analytic Reasoning About Sets
Alan F. McMichael, AT&T Bell Laboratories

11:55 AM – 12:35 PM
Meet-the-Author

12:35 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Search
Session Chair: Rich Korf

2:00 – 2:20 PM
Depth-First Versus Best-First Search
Nageshwara Rao Vempaty, University of Central Florida; Vipin Kumar, University of Minnesota; and Richard E. Korf, University of California, Los Angeles

2:20 – 2:40 PM
Optimal Satisficing Tree Searches
Dan Geiger and Jeffrey A. Barnett, Northrop Research and Technology Center

2:40 – 3:00 PM
A New Admissible Heuristic for Minimal-Cost Proofs
Eugene Charniak and Saadia Husain, Brown University

3:00 – 3:20 PM
Is There any Need for Domain-Dependent Control Information?
Matthew L. Ginsberg and Donald F. Geddis, Stanford University

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:00 PM
Session: Terminological Reasoning
Session Chair: Henry Kautz

4:00 – 4:20 PM
Integrating Rules in Term Subsumption Knowledge Representation Servers
Brian R. Gaines, University of Calgary

4:20 – 4:40 PM
Deduction as Parsing: Tractable Classification in the KL-ONE Framework
Marc Vilain, The MITRE Corporation

4:40 – 5:00 PM
Concept Languages as Query Languages
Maurizio Lenzerini and Andrea Schaerf, Universita di Roma "La Sapienza"

5:00 – 6:00 PM
Session: Belief Functions
Session Chair: Itay Meiri

5:00 – 5:20 PM
Combining Opinions About the Order of Rule Execution
Jeffrey A. Barnett, Northrop Research and Technology Center

5:20 – 5:40 PM
Explanation, Irrelevance, and Statistical Independence
Solomon E. Shimony, Brown University

5:40 – 6:00 PM
Conditions for the Existence of Belief Functions Corresponding to Intervals of Belief
John F. Lemmer, CTA Incorporated; and Henry E. Kyburg, Jr., University of Rochester

6:00 – 7:00 PM
Meet-the-Author/Reception
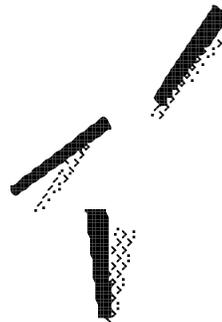
FORUM: CONSTRAINT REASONING AND COMPONENT TECHNOLOGIES

Marriott Hall Center, Anaheim Marriott

8:25 – 8:30 AM
Introduction
Paul Morris

8:30 – 9:50 AM
Session: Constraint-Based Reasoning
Session Chair: Paul Morris

8:30 – 8:50 AM
Conditional Existence of Variables in Generalized Constraint Networks
James Bowen and Dennis Bahler, North Carolina State University

8:50 – 9:10 AM
Arc-Consistency in Dynamic Constraint Satisfaction Problems
Christian Bessiere, Laboratoire d'Informatique, de Robotique et de Microelectronique de Montpellier

9:10 – 9:30 AM
Eliminating Interchangeable Values in Constraint Satisfaction Problems
Eugene C. Freuder, Univ. of New Hampshire

9:30 – 9:50 AM
On Generalized Interval Calculi
Gérard Ligozat, LIMSI, Universite Paris-Sud

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:50 AM
Session: Temporal Constraints
Session Chair: Eugene Freuder

10:30 – 10:50 AM
Integrating Metric and Qualitative Temporal Reasoning
Henry A. Kautz, AT&T Bell Laboratories; and Peter B. Ladkin, International Computer Science Institute

10:50 – 11:10 AM
Temporal Reasoning During Plan Recognition
Fei Song and Robin Cohen, University of Waterloo

11:10 – 11:30 AM
Metric Constraints for Maintaining Appointments: Dates and Repeated Activities
Massimo Poesio, University of Rochester; and Ronald J. Brachman, AT&T Bell Laboratories

11:30 – 11:50 AM
Combining Qualitative and Quantitative Constraints in Temporal Reasoning
Itay Meiri, Univ. of California, Los Angeles

11:50 AM – 12:30 PM
Meet-the-Author

12:30 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
**Session: Extensions of
Truth Maintenance**
Session Chair: Bob Nado

2:00 – 2:20 PM
***Efficiency of Production Systems When
Coupled with an Assumption Based
Truth Maintenance System***
Geneviève Morgue and Thomas Chehire,
Thomson-CSF/RCC

2:20 – 2:40 PM
Using Attention in Belief Revision
Xueming Huang, Gordon I. McCalla, and
Eric Neufeld, University of Saskatchewan

2:40 – 3:00 PM
***CATMS: An ATMS
Which Avoids Label Explosions***
John W. Collins, University of Illinois; and
Dennis DeCoste, Northwestern University

3:00 – 3:20 PM
Context Maintenance
Charles J. Petrie, Jr., Microelectronics and
Computer Technology Corporation

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:20 PM
**Session: Parallel Support for
Rule-Based Systems**
Session Chair: Walter Hamscher

4:00 – 4:20 PM
***IXM2: A Parallel Associative Processor
for Knowledge Processing***
Tetsuya Higuchi, Electrotechnical Labora-
tory; Hiroaki Kitano, Carnegie Mellon Uni-
versity; Tatsumi Furuya, Ken-ichi Handa,
Akio Kokubu, Electrotechnical Laboratory;
Naoto Takahashi, University of Tsukuba

4:20 – 4:40 PM
***Implementation of Multiple Rule Firing
Production Systems on Hypercube***
Steve Kuo and Dan Moldovan, University
of Southern California

4:40 – 5:00 PM
***Control Issues in Parallel Rule-Firing
Production Systems***
Daniel E. Neiman, University of Mass.

5:00 – 5:20 PM
***Using Abstraction to Automate Pro-
gram Improvement by Transformation***
Ian Green, University of Cambridge

5:20 – 7:00 PM
Meet-the-Author/Reception

FORUM: PLANNING,
PERCEPTION AND ROBOTICS
Marriott Hall North

8:25 – 8:30 AM
Introduction
Avi Kak

8:30 – 9:50 AM
**Session: Vision and
Sensor Interpretation**
Session Chair: Avi Kak

8:30 – 8:50 AM
***Automatic Generation of Object Class
Descriptions Using Symbolic Learning
Techniques***
R. L. Cromwell and A. C. Kak,
Purdue University

8:50 – 9:10 AM
***An Algorithm for Real-Time Tracking of
Non-Rigid Objects***
John Woodfill and Ramin Zabih,
Stanford University

9:10 – 9:30 AM
***A New Framework for Sensor
Interpretation: Planning to
Resolve Sources of Uncertainty***
Norman Carver and Victor Lesser,
University of Massachusetts

9:30 – 9:50 AM
The Geometry of Visual Coordination
Jean-Yves Hervé, Rajeev Sharma, and
Peter Cucka, University of Maryland

9:50 – 10:30 AM
Meet-the-Author/Break

10:30 – 11:50 AM
Session: Sensing and Reaction
Session Chair: David Miller

10:30 – 10:50 AM
***Anytime Problem Solving Using
Dynamic Programming***
Mark Boddy, Honeywell Systems and
Research Center

10:50 – 11:10 AM
***An Analysis of Error Recovery and
Sensory Integration for Dynamic Planners***
Bruce Abramson,
University of Southern California

11:10 – 11:30 AM
***Global Symbolic Maps
from Local Navigation***
David P. Miller, Jet Propulsion Laboratory;
and Marc G. Slack, MITRE Corporation

11:30 – 11:50 AM
***Sensible Planning:
Focusing Perceptual Attention***
Lonnie Chrisman and Reid Simmons,
Carnegie Mellon University

11:50 AM – 12:30 PM
Meet-the-Author

12:30 – 2:00 PM
Lunch Break

2:00 – 3:20 PM
Session: Robot Learning
Session Chair: Jonathan Connell

2:00 – 2:20 PM
***Fuzzy Modeling Using Generalized
Neural Networks and
Kalman Filter Algorithm***
Jyh-Shing R. Jang,
University of California, Berkeley

2:20 – 2:40 PM
***Automatic Programming of
Behavior-Based Robots Using
Reinforcement Learning***
Sridhar Mahadevan and Jonathan Connell,
IBM T. J. Watson Research Center

2:40 – 3:00 PM
***Cost-Sensitive Reinforcement Learning
for Adaptive Classification and Control***
Ming Tan, Carnegie Mellon University

3:00 – 3:20 PM
***Programming Robots Using Reinforce-
ment Learning and Teaching***
Long-Ji Lin, Carnegie Mellon University

3:20 – 4:00 PM
Meet-the-Author/Break

4:00 – 5:00 PM
Session: Integration and Recovery
Session Chair: Kris Hammond

4:00 – 4:20 PM
***Stabilizing Environments to Facilitate
Planning and Activity:
An Engineering Argument***
Kristian J. Hammond and Timothy M.
Converse, The University of Chicago

4:20 – 4:40 PM
***Underwater Experiments Using a
Reactive System for
Autonomous Vehicles***
R. Peter Bonasso, The MITRE Corporation

4:40 – 5:00 PM
***Failure Recovery:
A Model and Experiments***
Adele E. Howe and Paul R. Cohen,
University of Massachusetts

5:00 – 7:00 PM
Meet-the-Author/Reception

AI-ON-LINE PROGRAM

Anaheim Room, Anaheim Convention Center

8:15 – 10:15 AM
Grand Slam Success Stories: Strategic AI Applications in Conventional Business Applications
Organized by AICorp
  Moderator: Nancy Martin,
Coopers & Lybrand
  Panelists: Larry Lefkowitz, Bellcore, Steve Shavel, Frito Lay; Chris Morrison, London Life; Mike Rogolski, Sears; Mike Hully, Covia Technology; George Clay, LEGENT

10:45 AM – 12:45 PM
Hybrid AI Solutions: Beyond Expert Systems (Including Neural Networks, Fuzzy Logic, Operations Research, Machine Learning)
Organized by Arthur Andersen and Tom Schwartz Associates
  Panelists: Robert Tap, Accurate Automation; John Darvish, Boeing; Pilar de la Orden, CAMPSA; Christopher Colbert, NASA; Murray Ruggiero, Promised Land Technologies

1:00 – 3:00 PM
True and Unexpurgated Stories: What AI Has Done for Me Lately
Organized by
International Business Machines
  Moderator: Rick Walsh, Synapse
  Panelists: Alen Baker, Duke Power; Rob Bigini, Dun & Bradstreet; Susan Garavaglia, Chase Manhattan; Robert Epps, Continental Insurance

3:30 – 5:30 PM
New Advances in Design Automation with AI
Organized by Carnegie Group
  Moderator: D. Vivek,
Unique Business Systems
  Panelists: Mark Fox, Carnegie Mellon University; Fritz Prinz, Carnegie Mellon University; Bill Blake, Digital Equipment; Dave Fawcett, Ford; Ted Smith; U.S. West; Alice Agogino, University of California at Berkeley

NOTES

8:00 AM – 12:30 PM
KiddieCorp
Los Angeles/La Jolla, Anaheim Marriott

INVITED PANEL

Pacific Ballroom, Anaheim Hilton

8:30 – 10:00 PM
Panel: Household Robots
Moderator: Tom Dean
Panelists: K. G. Englehart, Robotics Institute, Carnegie Mellon University; George Leccese, Denning Mobile Robots; Earl Sacerdoti, The Copernican Group

PLENARY SESSION

Pacific Ballroom, Anaheim Hilton

10:30 AM – 12:00 PM
Shared Knowledge and Infrastructure Development
Bob Kahn, Corporation for National Research Initiatives
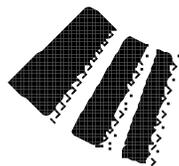
FORUM: CONSTRAINT REASONING AND COMPONENT TECHNOLOGIES

Marriott Hall Center, Anaheim Marriott

8:25 – 8:30 AM
Introduction
Dana Nau

8:30 – 9:30 PM
Session: Verification of Rule-Based Systems
Session Chair: Dana Nau

8:30 – 8:50 AM
Verification of Multi-Level Rule-Based Expert Systems
Pedro Meseguer, C.S.I.C.

8:50 – 9:10 AM
Formal Verification of Pure Production System Programs
Rose F. Gamble, Gruia-Catalin Roman, and William E. Ball, Washington University

9:10 – 9:30 AM
Learning Meta Knowledge for Database Checking
Jeffrey C. Schlimmer, Carnegie Mellon University

9:30 – 10:10 AM
Meet-the-Author/Break

FORUM: TRACTABLE INFERENCE

Marriott Hall North

8:25 – 8:30 AM
Introduction
Lynn Stein

8:30 – 9:50 AM
Session: Tractable Inference
Session Chair: Lynn Stein

8:30 – 8:50 AM
Negation and Proof by Contradiction in Access-Limited Logic
J. M. Crawford and B. J. Kuipers, The University of Texas at Austin

8:50 – 9:10 AM
Knowledge Compilation using Horn Approximations
Bart Selman and Henry Kautz, AT&T Bell Laboratories

9:10 – 9:30 AM
Observations on Cognitive Judgments
David McAllester, Massachusetts Institute of Technology

9:30 – 9:50 AM
Natural Language Based Inference Procedures Applied to Schubert's Steamroller
Robert Givan, David McAllester, and Sameer Shalaby, Massachusetts Institute of Technology

9:50 – 10:30 AM
Meet-the-Author/Break

FORUM: ISSUES IN AUTOMATED REASONING

Marriott Hall South, Anaheim Marriott

8:25 – 8:30 AM
Introduction
Johan de Kleer

8:30 – 9:50 AM
Session: Truth Maintenance Systems
Session Chair: John de Kleer

8:30 – 8:50 AM
An Efficient First-Order Horn-Clause Abduction System Based on the ATMS
Hwee Tou Ng and Raymond J. Mooney, University of Texas at Austin

8:50 – 9:10 AM
The Common Order-Theoretic Structure of Version Spaces and ATMS's (Extended Abstract)
Carl A. Gunter, Teow-Hin Ngair, University of Pennsylvania; Prakash Panangaden, McGill University; Devika Subramanian, Cornell University

9:10 – 9:30 AM
ACP: Reason Maintenance and Inference Control for Constraint Propagation Over Intervals
Walter Hamscher,
Price Waterhouse Technology Centre

9:30 – 9:50 AM
Controlling Inequality Reasoning in a TMS-Based Analog Diagnosis System
David Jerald Goldstone, Massachusetts Institute of Technology and Xerox Palo Alto Research Center

9:50 – 10:30 AM
Meet-the-Author/Break

ANAHEIM HILTON
BALLROOM LEVEL

PACIFIC BALLROOM
(Plenary Sessions)

PACIFIC PROMENADE

PACIFIC FOYER

RGST ROOM

RGST ROOM

STAIRWAY TO MEZZANINE

REGISTRATION DESK

CALIFORNIA FOYER

CALIFORNIA PROMENADE

RGST ROOM

RGST ROOM

CALIFORNIA PAVILION C

BALLROOM BELOW

SUNSET

SALINAS

MONTEREY

CARMEL

SAN SIMEON B

SAN SIMEON A

AVILA B

AVILA A

LIDO C

LIDO B

LIDO A

RGST ROOM

MANHATTAN

REDONDO

PALOS VERDES A

PALOS VERDES B

C

HUNTINGTON B

A

PARADISE

EL CAPITAN A

EL CAPITAN B

RGST ROOM

L.P. JOLLA

EXECUTIVE BOARDROOM

EXECUTIVE ANTEROOM

BUS.

CORRIDOR

BALBOA C

BALBOA B

BALBOA A

INFO DESK

RGST ROOM

LAGUNA A

LAGUNA B

SAN CLEMENTE A

SAN CLEMENTE B

SAN CLEMENTE

OCEANSIDE

PAVILION BELOW

SANTA BARBARA

VENTURA

MALIBU

SANTA MONICA

RGST ROOMS

ANAHEIM HILTON
CONCOURSE LEVEL

ANAHEIM MARRIOTT

CALIFORNIA MEETING ROOMS
Located on the Hotel's Main Tower Lower Level

| DESERT SPRINGS | LA JOLLA | LOS ANGELES | | NEWPORT BEACH | RANCHO LAS PALMAS | SAN DIEGO |

ELEVATOR

MAIN ENTRANCE

LOBBY BAR

GIFT SHOP

WOMEN

MEN

HAIR SALON

NORTH TOWER ENTRANCE

ELEVATOR

THE VERANDA RESTAURANT

GAMBITS LOUNGE

ENTRANCE

NORTH POOL

MEN

WOMEN

ORANGE COUNTY BALLROOM

GRAND BALLROOM

WOMEN

MEN

MARRIOTT HALL ENTRANCE

MARRIOTT HALL FOYER

NORTH HALL

CENTER HALL

MARRIOTT HALL

SOUTH HALL

GROUND LEVEL

NORTH PARKING LOT

to ACC

⇦ NORTH

BUENA PARK

FULLERTON

ORANGETHORPE

RIVERSIDE FREEWAY (91)

LA PALMA AVE.

LINCOLN AVE.

HARBOR BLVD.

ANAHEIM BLVD.

STATE COLLEGE BLVD.

BALL RD.

ORANGE

KATELLA RD.

KNOTT

DISNEYLAND

ANAHEIM CONVENTION CENTER

CONVENTION WAY

SANTA ANA FREEWAY (5)

MANCHESTER AVE.

NEWPORT FREEWAY (55)

CHAPMAN AVE.

GARDEN GROVE

GARDEN GROVE BLVD.

EUCLID ST.

WEST ST.

GARDEN GROVE FREEWAY (22)

BRISTOL

MAIN ST.

NEWPORT BLVD.

WESTMINSTER AVE.

17TH ST.

BOLSA AVE.

1ST ST.

LAX

EDINGER AVE.

MACARTHUR BLVD.

BEACH BLVD.

SAN DIEGO FREEWAY (405)

BROOKHURST ST.

HUNTINGTON BEACH

COSTA MESA

JOHN WAYNE AIRPORT

SAN DIEGO FREEWAY (405)

BRISTOL ST.

C.D.M. FWY (73)

MACARTHUR BLVD.

MISSION VIEJO

LAGUNA FREEWAY

PACIFIC COAST FWY (1)

NEWPORT BEACH

SANTA CATALINA ISLAND

PACIFIC COAST FWY (1)

LAGUNA BEACH

SAN JUAN CAPISTRANO

PACIFIC OCEAN