

AAAI 1994
Spring Symposium Series

March 21-23, 1994
Stanford University, California
(Special Symposium, March 19-20)

Registration

Sponsored by the
American Association for Artificial Intelligence
445 Burgess Drive, Menlo Park, CA 94025
(415) 328-3123
sss@aaai.org

The American Association for Artificial Intelligence, in cooperation with Stanford University's Department of Computer Science, presents the 1994 Spring Symposium Series, to be held Monday - Wednesday, March 21-23, 1994, at Stanford University. The topics of the ten symposia in the 1994 Spring Symposium Series are:

- *Active NLP: Natural Language Understanding in Integrated Systems*
- *Applications of Computer Vision in Medical Image Processing*
- *Artificial Intelligence in Medicine: Interpreting Clinical Data*
- *Computational Organization Design*
- *Decision-Theoretic Planning*
- *Detecting and Resolving Errors in Manufacturing Systems*
- *Goal-Driven Learning*
- *Intelligent Multi-Media Multi-Modal Systems*
- *Software Agents*
- *Toward Physical Interaction and Manipulation*

In addition, an eleventh symposium will be held the preceding weekend (19 and 20 March) at the same location:

- *Believable Agents*

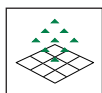
The highlights of each symposium will be presented at a special plenary session. Working notes will

be prepared and distributed to participants in each symposium, but will not otherwise be available unless published as an AAAI Technical Report or edited collection.

Each symposium will have limited attendance. Participants will be expected to attend a single symposium throughout the symposium series.* In addition to participants selected by the program committee of the symposia, a limited number of other interested parties will be allowed to register in each symposium on a first-come, first-served basis. To register, please fill out the enclosed form, and send it along with payment to:

1994 Spring Symposium Series
AAAI
445 Burgess Drive
Menlo Park, CA 94025
Fax: (415) 321-4457 (credit card orders only)
Email: sss@aaai.org (credit card orders only)

**Please note:* The symposium on Believable Agents will be held the weekend preceding the remainder of the symposia. Participation in this symposium does not preclude attendance at one of the others.



Active NLP: Natural Language Understanding in Integrated Systems

Active NLP, in analogy to Active Vision, focuses on how understanding is pragmatically determined by the goals of the overall system. For this reason, the symposium welcomes participants who would not normally consider themselves to be working on natural language, but who are interested in how natural language could be a part of their research.

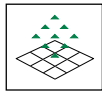
This symposium is designed to address issues raised by the interaction or integration of natural language understanding in complete systems. Rather than see natural language as a text meaning extraction problem, the symposium's emphasis is on how the goals of an intelligent system determine what it means to understand. A single example might be an advice-taking planner, which could range from a reactive system in which keywords are wired to behaviors, to a case-based scheduler that takes indexing advice.

Specific issues of interest include: how knowledge is shared between tasks at the design or implementation level; when, to what extent, and how system behavior affects language understanding or the reverse; what sort of learning takes place; and issues of architecture. In general, the symposium is interested in how natural language understanding affects the achievement of a system's goals, and how a system

aimed at achieving goals affects a theory of natural language understanding.

Organizing Committee

Jill Fain Lehman, Carnegie Mellon University; Kurt Eiselt, Georgia Institute of Technology; Charles Martin (chair), University of Chicago, martin@cs.uchicago.edu; Marcel Schoppers, Stanford University.



Applications of Computer Vision in Medical Image Processing

Significant interest and activity in medical image processing has developed among computer vision researchers in the last several years. This interdisciplinary activity is still in a relatively early stage of development, in terms of applied technology, and the size of the research efforts.

This symposium is intended to serve several purposes:

- To bring together vision and robotics researchers who are currently applying computer vision to medical image processing problems.
- To increase communication between established researchers in medical image processing and computer vision researchers.
- To provide information to researchers that are interested in the field.

The symposium will consist of short presentations of papers and work in progress, and discussions. Working notes will be produced and distributed to the participants.

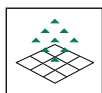
The symposium will focus on the following topics, among others:

- image guided medical procedures and robotics
- image processing applied to laparoscopic and other endoscopic procedures
- change detection in medical images
- recognition in medical images

- multimodal registration of medical images
- elastic registration of medical images
- motion analysis in medical images
- anatomical atlases
- applications of computer vision in segmentation of medical imagery

Organizing Committee

Nicholas Ayache, INRIA; Eric Grimson, Massachusetts Institute of Technology; Takeo Kanade, Carnegie Mellon University; Ron Kikinis, Harvard Medical School; William M. Wells III (chair), Harvard Medical School, sw@ai.mit.edu.

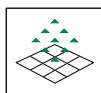


Artificial Intelligence in Medicine: Interpreting Clinical Data

Many current efforts in artificial intelligence in medicine are geared towards providing decision support for tasks such as monitoring patients' clinical courses, forecasting outcomes, and discovering new relational knowledge. The emphasis of this symposium will be on methodologies that provide robust autonomous performance in data-rich clinical environments ranging from busy outpatient practices to operating rooms and intensive care units. The symposium organizers have provided two sample data sets on which participants will focus their presentations. The first day of the symposium will be devoted to methods and research projects which deal with sparse information typical of clinical and outpatient medical practice, and the second day will focus on projects dealing with dense information typical of critical care environments. Each day's program will start with an invited talk and will be wrapped with a panel discussion. The highlight of the final day will be a panel discussion on evaluation and fielding of medical decision aids. The panelists (subject to change) will be Harry Pople, Peter Szolovits, Jeremy Wyatt, and David Margulies.

Organizing Committee

Enrico Coiera, Hewlett-Packard Laboratories/Bristol; Isaac Kohane (cochair), Harvard Medical School; Ramesh Patil, USC/Information Sciences Institute; Mario Stefanelli, Universita di Pavia; Serdar Uckun (cochair), Stanford University.



Believable Agents

AI researchers have long sought to construct autonomous, interactive creatures. These entities bring special delight when they are imagined to project a sense of being really there—aware, intentioned, and capable of significant social interaction. Accomplishing this is increasingly demanded by new trends in user interfaces and interactive entertainment.

AI researchers generally have tried to achieve this effect by modeling human capabilities as deeply as possible. However, this may be only part of the solution. The arts (film, drama, novels) have long studied a related problem, in which the agents, called “characters,” are created to permit suspension of disbelief. Artists know how to achieve this using highly simplified agents (simple body, simple mind, simple environment, e.g., Bugs Bunny). They know what abstractions can be made safely, and which facets of appearance and behavior are crucial to maintain. We believe these artists can significantly inform AI researchers trying to construct believable interactive creatures.

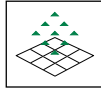
This symposium will bring together researchers and artists interested in merging AI and the arts to explore the idea of believable agents. We feel this is a fresh way of looking at the task of building agents, and that clarifying the nature of this familiar task will yield

interesting new research problems and useful new artifacts.

Organizing Committee

Joseph Bates (chair), Carnegie Mellon University; Barbara Hayes-Roth, Stanford University; Brenda Laurel, Interval Research; Nils Nilsson, Stanford University.

(Note: this symposium will be held just prior to the others, on March 19-20, 1994. Attendees may attend a second symposium from March 21-23.)



Computational Organization Design

COD is an important research area and an interesting and promising class of abstract design problems. Key research questions include:

How can design process models (DPMs) for organizational design be characterized, identified and verified? A DPM is an explicit model of the activities carried out while creating a design. Adopting a particular DPM amounts to making the hypothesis that, over a collection of design problems, applying the DPM will generate a useful percentage of highly-evaluated acceptable designs with acceptable levels of effort.

Can AI, with its unique capabilities for rigorous, qualitative inference, provide powerful new capabilities to formalize and execute organization theory? For example, most organization theory to date makes only qualitative predictions about aggregate behaviors of organizations, treating environmental constraints and contingencies like point loads at the center of mass of the organization.

How can COD contribute in practical arenas such as business process reengineering and redesign?

To what extent can organization design be treated as a routine design problem, with a well defined space of possibilities and explicit evaluation criteria?

Are there any important implications of the fact that organizations

are abstract objects, subject to constraints of a different nature from the constraints that physical objects are subject to?

How should a DPM for COD differ from DPMs for other applications?

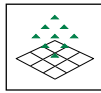
What role does creative design play in COD?

Other questions are: What is the state of the art of computational organization design? What should the agenda for future research be?

The goal of this symposium is to bring together researchers from the fields of AI, design and organization theory in order to define and build a community of researchers active in computational organization design. The format of the symposium will be designed with the aim of supporting this goal and will include selected presentations and extensive, but closely moderated, discussions.

Organizing Committee

Ingemar Hulthage (chair), University of Southern California, hulthage@usc.edu; Raymond E. Levitt, Stanford University; Duvvuru Sriram, MIT; Sarosh Talukdar, Carnegie-Mellon University.



Decision-Theoretic Planning

Both AI planning and decision theory are devoted to the problem of how an agent can or should choose a course of action, given information about the world and about its capabilities and preferences. Historically, the AI community has concentrated on the task of synthesizing plans from primitive actions, whereas research in decision theory and related disciplines has concentrated on formalizing and exploring frameworks for choosing among alternatives.

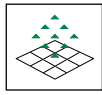
This symposium aims to unify current lines of research in AI planning with that in related disciplines—decision analysis, economics, and control theory, for example—by exploring how decision-theoretic constructs for describing an agent's preferences and uncertain beliefs can be applied to the problem of plan synthesis.

This symposium will be of interest to researchers in automated planning and decision making, and especially those investigating the connection between AI techniques and normative theories of decision. Symposium topics will include, but will not be limited to: algorithms for planning and sequential decision making, representing and reasoning about preferences, modeling the uncertain effects of actions, constructing probabilistic domain models and utility-theoretic preference models,

specialized problems and representations, decision-theoretic approaches to meta-level reasoning.

Organizing Committee

Steve Hanks (chair), University of Washington, hanks@cs.washington.edu; Stuart Russell, University of California, Berkeley; Michael P. Wellman, University of Michigan.



Detecting and Resolving Errors in Manufacturing Systems

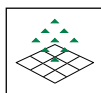
This symposium will bring together researchers working on troubleshooting, diagnosis, monitoring, and recovery from errors in manufacturing applications. The main purpose is to bring together people from manufacturing with people from AI to discuss how AI techniques and methodologies can be used to address the problems of detecting and resolving errors. The symposium will provide a forum for reviewing the state of the art and for proposing new avenues of exploration.

Any system designed to perform a manufacturing task must have ways of detecting and recovering from errors. Timely detection of anomalies in the behavior of the system is essential for its continuous safe operation. This involves preventing or minimizing the occurrence of faults through robust design, detecting abnormal conditions, isolating faults, and finding ways of maintaining safe operation despite the presence of faults. The manufacturing environment is often sufficiently uncertain and dynamic, and the manufacturing systems are sufficiently complex to make detection and recovery from errors a major task. The purpose of this symposium is to analyze these issues and propose how to create manufacturing systems able to achieve their tasks despite unpredicted contingencies.

The symposium intends to maintain a balance between theoretical issues and more practical descriptions of implemented systems. There will be invited talks, sessions of contributed papers, and panel discussions. The emphasis will be on discussing issues and approaches not simply on presenting papers.

Organizing Committee

Robert D. Borchelt, University of Wisconsin-Milwaukee; Frank DiCesare, Rensselaer Polytechnic Institute; Bruce Donald, Cornell University; Mark Drummond, NASA Ames Research Center; Maria Gini (chair), University of Minnesota; Damian Lyons, Philips Laboratories.



Goal-Driven Learning

Goal-driven learning refers to the process of using the overall goals of an intelligent system to make decisions about when learning should occur, what should be learned, and which learning strategies are appropriate in a given context. This focusing process may take place at any decision point during learning—for example, when determining what to learn, selecting a bias, pruning the space of theories to be considered, or generating experiments for data gathering.

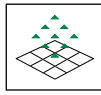
Research in psychology, education, and AI has shown the need for intelligent systems to make decisions about what and how to learn. The common rationale, and the principle around which the symposium will be organized, is that the value of learning depends on how well it satisfies the goals of the system. The symposium will bring together researchers from diverse research areas to discuss issues in how learning goals arise, how they affect learner decisions of when and what to learn, and how they guide the learning process.

Time will be set aside for debate and discussion during the technical sessions, and the symposium will conclude with a panel and audience discussion of the issues raised during the symposium. Members of the concluding panel will be selected during the meeting, with the in-

tention of creating a panel representative of the viewpoints expressed at the symposium.

Organizing Committee

Marie desJardins (cochair), SRI International, marie@erg.sri.com; Lawrence Hunter, Foster John Provost, Ashwin Ram (cochair), Georgia Institute of Technology, ashwin@cc.gatech.edu.



Intelligent Multi-Media Multi-Modal Systems

The symposium is aimed at bringing together researchers from computer vision, natural language processing, generation and input of text, speech, and graphics, knowledge representation, discourse planning, human activity modeling and human computer interaction. The symposium will cover problems of AI and HCI that address the issues of developing advanced forms of input and output using multi-media, multi-modal systems. The symposium will bring together the theories and practices of AI and HCI modeling to solve problems facing the design of real interactive application systems.

The symposium will consider the following issues:

- 1) Use of computer based vision techniques to perform face recognition, gesture recognition, lip reading and eye movement tracking as forms of input to interactive programs. Also, of concern is how to integrate and interpret multiple inputs (e.g., text, speech, gesture, eye motion) into a common semantic representation.

- 2) Generating integrated, textual, graphical (including 2D, 3D, and animation) and speech output as part of an interactive dialogue.

- 3) Using semantic and pragmatic discourse models to structure M4 input and output dialogues. Also of interest here is the acquisition, representation, and maintenance of

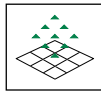
models of media, the user, and the multimedia dialogue.

- 4) Using agent-based models to specialize the integration of M4 interactive systems.

- 5) Facilitating direct interaction between KBSs and end users through M4 interactions to support the externalization and development of knowledge.

Organizing Committee

Steve Feiner, Columbia University; Peter Johnson (chair), Queen Mary and Westfield College, University of London; Joe Marks, DEC Cambridge; Mark Maybury, MITRE Boston; Johanna Moore, University of Pittsburgh.



Software Agents

Software agents are sensor/effector systems that operate within real-world software environments such as operating systems, databases, or computer networks. Their sensors observe features of this external environment, and their effectors can both alter the state of the environment directly, and communicate with other agents. Software agents pursue goals such as acquiring information about the environment or modifying its state, either individually or in teams. In contrast to work on human-computer collaboration, our focus is on agents with a high degree of autonomy and flexibility.

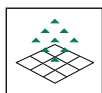
Advances in computer, information, and telecommunications technology have made software agents both necessary and possible. However, the role of AI and AI researchers in these developments has yet to be determined. We believe that AI has the potential to contribute to these developments, on the one hand, and that software domains offer fascinating research challenges on the other. To capitalize on this opportunity we seek to bring together researchers in this new area, to develop a common vocabulary, and to identify the fundamental research issues that define it. Specifically, we would like to identify:

- Challenge problems for the community (e.g. E-mail filtering)

- Possibilities for software agent interaction (e.g. can Maes and Mitchell's meeting scheduling systems query Etzioni's UNIX softbot for information about potential meeting participants such as their phone numbers, current location, etc.?)
- Possible connections to computer scientists outside AI (in databases, operating systems, office automation, etc.)

Organizing Committee

Oren Etzioni (chair), University of Washington; Pattie Maes, MIT; Tom Mitchell, Carnegie Mellon University; Yoav Shoham, Stanford University.



Toward Physical Interaction and Manipulation

The range and scope of practical robotics applications depends critically on the ability of robots to physically interact with their environments. Current applications are highly specialized, and typically they involve carefully controlled, well understood workspaces with little or no sensory feedback. Construction costs and inflexibility limit the economic viability of these systems. The general manipulation skills of humans and other animals contrasts starkly with the current capabilities of robots. From threading a needle, to opening a door, catching a ball, or moving a sofa, humans engage their environments in myriad ways. Unlike most current robots, humans rely upon rich sources of sensory feedback to cope with uncertainties in the world.

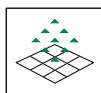
The purpose of this symposium is to draw together researchers from a range of disciplines to study the principles of physical interaction and manipulation. Our objectives are theories, paradigms, and ontologies for describing and understanding natural systems and for designing and building artificial systems capable of manipulating their environments.

The discussion will center on a specific set of tasks selected in advance, such as catching a ball or feeding a person. Selected designs will be presented, discussed, and compared in an attempt to reach a

more general understanding. By analyzing a range of tasks, we aim to broaden the perspective, identifying common themes and useful design principles.

Organizing Committee

Emilio Bizzi, MIT; Jon Connell, IBM Watson; David Coombs (co-chair), NIST, david.coombs@nist.gov; Ken Goldberg, USC; Rod Grupen, UMass; Stan Rosenschein, Teleos Research; Steven Whitehead (co-chair), GTE Labs, swhitehead@gte.com.



Registration

ALL ATTENDEES MUST PREREGISTER. Each symposium has a limited attendance, with priority given to invited attendees. All accepted authors, symposium participants, and other invited attendees must register by **February 15, 1994**. After that period, registration will be opened up to the general membership of AAAI and other interested parties. All registrations must be postmarked by **March 1, 1994**.

Your registration fee covers your attendance at the symposium, a copy of the working notes for your symposium, and the reception.

Checks (drawn on US bank) or international money orders should be made out to AAAI. VISA, MasterCard and American Express are also accepted. Please complete the attached registration form and mail it with your fee to:

AAAI Spring Symposium Series
445 Burgess Drive
Menlo Park, CA 94025

Parking will be available on the Stanford campus from March 21-23 for \$15.00. Parking for attendees of the Believable Agents Symposium, March 19-20, will be available for \$10.00. Application for a parking permit is included on the attached registration form. A permit will be mailed to you with your preregistration materials along with a map and directions to the assigned lots.

Please note: Requests for refunds must be received *in writing by March*

4, 1994. A \$25.00 processing fee will be levied on all refunds granted.

When you arrive at Stanford, please pick up your complete registration packet in the lobby of Cubberley Auditorium, located in the School of Education. Registration hours will be:

Saturday, March 19: 8:00 AM-5:00 PM

Sunday, March 20: 8:00 AM-5:00 PM

Monday, March 21: 8:00 PM-5:00 PM

Tuesday, March 22: 8:00 AM-5:00 PM

Wednesday, March 23:

8:00 AM-12:00 PM

Please call Sally McLaughlin at 415/328-3123 for further information.

Hotels

For your convenience, AAAI has reserved a block of rooms at the following hotels:

Symposium attendees must contact the hotels directly. Please identify yourself as an AAAI Spring Symposium Series registrant to qualify for the reduced rate.

Creekside Inn (Best Western)

3400 El Camino Real

Palo Alto, CA 94306

Phone: 415/493-2411

Fax: 415/493-6787

Marguerite shuttle pick-up: 0.5 mile

Rates: \$68 (S or D)

Reserve before 2/26/94

Holiday Inn-Palo Alto

625 El Camino Real

Palo Alto, CA 94301

Phone: 415/328-2800

or 800/874-3516
Fax: 415/327-7362
Marguerite shuttle stop nearby
Rates: \$92 (S), \$102 (D)
Reserve before: 3/7/93

Stanford Terrace Inn
531 Stanford Ave
Palo Alto, CA 94306
Phone: 415/857-0333
Fax: 415/857-0343
Marguerite shuttle stop nearby
Rates: \$82 (S), \$92 (D)
Reserve before: 2/25/93

Other Hotels
(Available only on a first-come, first served basis; all prices are subject to changes without notice):

Mermaid Inn
727 El Camino Real
Menlo Park, CA 94025
Phone: 415/323-9481 (No fax).
Rates: \$48-56 (S), \$58-68 (D)

Riviera Motor Lodge
15 El Camino Real
Menlo Park, CA 94025
Phone: 415/321-8772
Fax: 415/321-2137
Rates: \$45 (S), \$50 (D)

The Cardinal Hotel
235 Hamilton Avenue
Palo Alto, CA 94301
Phone: 415/323-5101
Fax: 415/325-6086
Marguerite shuttle stop nearby
Rates: \$60 (S & D)

Hotel California
2431 Ash Street
Palo Alto, CA 94306
Phone: 415/322-7666 (No fax).
Marguerite shuttle stop nearby
Rates: \$50 (S), \$53 (D)
(Continental breakfast included)

Travelodge
3255 El Camino Real

Palo Alto, CA 94306
Phone: 415/493-6340
Fax: 415/424-9535
Marguerite shuttle stop nearby
Rates: \$492 (S), \$54 (D)

Air Transportation

AAAI has selected United Airlines as the official carrier. Fares will reflect a five percent discount (ticket designator is XF5) off any United or United Express published fare in effect when tickets are purchased, subject to all applicable restrictions, or a ten percent discount (ticket designator is XF10) off applicable United or United Express coach fares in effect when tickets are purchased 0 days in advance and the reservations are made in M class of service. These special fares are subject to availability at the time of booking. Call United Airlines directly (800/521-4041) seven days a week from 7:00 AM-1:00 AM EST. If you prefer dealing with a travel agent, you may contact Travel with Ulla, (415/389-6264 or fax 415/388-6830). The identification code is 545RS. The discount is valid for the travel period March 16-26, 1994.

Disclaimer: In offering United Airlines, Hertz, the Creekside Inn (Best Western), Holiday Inn, and Stanford Terrace Inn (hereinafter referred to as "Supplier") and all other service providers for the AAAI Spring Symposium Series, the American Association for Artificial Intelligence (AAAI) acts only in the capacity of agent for the Supplier which is the provider of transportation or of hotel rooms. Because AAAI has no control over the personnel, equipment or operations of providers of accommodations or other services included as part of the Symposium program, AAAI assumes no responsibility for and will not be liable

for any personal delay, inconveniences or other damage suffered by symposium participants which may arise by reason of (1) any wrongful or negligent acts or omissions on the part of any Supplier or its employees, (2) any defect in or failure of any vehicle, equipment or instrumentality owned, operated or otherwise used by any Supplier, or (3) any wrongful or negligent acts or omissions on the part of any other party not under the control, direct or otherwise, of AAAI.

Ground Transportation

This information is the best available at time of printing. Fares and routes change frequently. Please check by telephoning the appropriate numbers below for the most up-to-date information.

Car Rental

Hertz has been designated as the official rental car company for the AAAI Spring Symposium Series. To qualify for the special rates, please call the Hertz Convention desk at 800/654-2240. Be sure to identify yourself as an attendee of the symposium, and give the code CV #3338. Hertz has convenient rental desks located at both the San Francisco and San Jose airports.

Van

Supershuttle—24 hour van service to and from San Francisco Airport. San Francisco Airport–Palo Alto rates are: \$23.00 for one person one way; \$23.00 plus \$7.00 for two persons going to the same address. Cash and major credit cards accepted. For reservations call 415/558-8500.

Airport Connection—Van service \$15.00 one way to and from San Francisco Airport to Palo Alto. From San Jose Airport, shared ride service (no vans) is \$19.00 to Palo Alto. Cash, major credit cards, or checks

accepted. Call 415/363-1500 within California, or 800/247-7678 in other areas. White courtesy telephone available at San Francisco Airport.

Stanford Shuttle

The Stanford University Marguerite Shuttle Bus service provides service from several points along El Camino Real, the train station, and other surrounding locations to the Stanford Oval as well as transportation around the Stanford campus. Complete Marguerite schedules will be included in registration packet.

Train

CalTrain runs between San Francisco and Palo Alto station starting at 5:15 AM with the last train leaving San Francisco at 10:00 PM (weekdays), 12:00 midnight (Friday and Saturday nights). The fare is \$6.50 round trip for same-day travel, or \$3.25 one way. For up-to-date fare information and time tables, call toll free 800/660-4287.

Tentative Program Schedule (*subject to change*)

Saturday, March 19: 9:00 AM–5:30 PM

Symposia Session: Believable Agents

Sunday, March 20: 9:00 AM–5:30 PM

Symposia Session: Believable Agents

Monday, March 21: 9:00 AM–5:30 PM

Symposia sessions

Reception, Faculty Club:

6:00 PM–7:00 PM

Tuesday, March 22: 9:00 AM–5:30 PM

Symposia sessions

Plenary sessions, Cubberley

Auditorium: 7:30 PM–9:00 PM

Wednesday, March 23: 9:00 AM–12:30 PM

Symposia sessions

Registration will be in the lobby of Cubberly Auditorium in the School of Education.

Registration Form—1994 AAAI Spring Symposium Series

ALL ATTENDEES MUST PREREGISTER

Please complete in full and return to AAAI, postmarked by February 15, 1994 (invited attendees), or by March 1, 1994 (general registration).

Please print or type.

First name _____ Last name _____

Affiliation _____

Address: _____ Home or Business

City _____ State _____

Zip or postal code _____ Country _____

Daytime telephone _____ Email _____

Symposium

(Please check only one—Believable Agents may be taken with one other symposium for an additional fee)

- 1. Active NLP: Natural Language Understanding in Integrated Systems
- 2. Applications of Computer Vision in Medical Image Processing
- 3. Artificial Intelligence in Medicine: Interpreting Clinical Data
- 4. Believable Agents *(may be taken with one other symposium for an additional fee)*
- 5. Computational Organization Design
- 6. Decision-Theoretic Planning
- 7. Detecting and Resolving Errors in Manufacturing Systems
- 8. Goal-Driven Learning
- 9. Intelligent Multi-Media Multi-Modal Systems
- 10. Software Agents
- 11. Toward Physical Interaction and Manipulation

Fee

- Member: \$ 215.00 Nonmember: \$ 255.00
- Student Member: \$ 100.00 Student nonmember: \$ 120.00
(students must send legible proof of full-time student status)
- Temporary Stanford University parking permit (\$15.00 and/or \$10.00)

TOTAL FEE *(Please enter correct amount)* \$ _____

Method of Payment *(please circle one)*

Check Mastercard VISA American Express

Credit card number _____

Expiration date _____

Name (as it appears on card) _____

Signature _____

Please mail completed form with your payment to

Spring Symposium Series-94 • 445 Burgess Drive • Menlo Park, California 94025

Please Note: Requests for refunds must be received *in writing* by March 4, 1994.

A \$25.00 processing fee will be levied on all refunds granted.

For Office Use Only

Check Number _____ Amount _____

Received _____

