



AAAI 2002
Spring Symposium Series

March 25-27, 2002
Stanford University, California

Registration

Sponsored by the
American Association for Artificial Intelligence
445 Burgess Drive, Menlo Park, CA 94025
650-328-3123
650-321-4457 (Fax)
sss@aaai.org
www.aaai.org/Symposia/

The American Association for Artificial Intelligence, in cooperation with Stanford University's Department of Computer Science, presents the 2002 Spring Symposium Series, to be held Monday through Wednesday, March 25-27, 2002, at Stanford University. The topics of the nine symposia are:

- Acquiring (and Using) Linguistic (and World) Knowledge for Information Access
- Artificial Intelligence and Interactive Entertainment
- Collaborative Learning Agents
- Information Refinement and Revision for Decision Making: Modeling for Diagnostics, Prognostics, and Prediction
- Intelligent Distributed and Embedded Systems
- Logic-Based Program Synthesis: State of the Art and Future Trends
- Mining Answers from Texts and Knowledge Bases
- Safe Learning Agents
- Sketch Understanding

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 registration form, and send it along with payment to:

2002 Spring Symposium Series
AAAI, 445 Burgess Drive
Menlo Park, CA 94025
Telephone: 650-328-3123*
Fax: 650-321-4457*
E-mail: sss@aaai.org*

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This document is also available at <http://www.aaai.org/Symposia/Spring/2002/sssregistration-2002.pdf>.

Tentative Program Schedule

(subject to change)

Monday, March 25

9:00 AM - 5:30 PM: Symposia sessions
6:00 PM - 7:00 PM: Reception

Tuesday, March 26

9:00 AM - 5:30 PM: Symposia sessions
6:00 PM - 7:00 PM: Plenary session

Wednesday, March 27

9:00 AM - 12:30 PM: Symposia sessions

Registration will be held on the Stanford University Campus on the lower level of the Cummings Art Building in the foyer of Annenberg Auditorium.

Acquiring (and Using) Linguistic (and World) Knowledge for Information Access

Information access tasks need flexible text understanding. While full text understanding remains a distant and possibly unattainable goal, to deliver better information access performance we must advance content analysis beyond the simple algorithms used today—and the dynamic nature of both information needs and information sources will make a flexible model or set of models a necessity. Models must either be adaptive or easily adapted by some form of low-cost intervention; and they must support incremental knowledge build-up. The first requirement involves acquisition of information from unstructured data; the second involves defining an inspectable and transparent model and developing an understanding of knowledge-intensive interaction.

Text understanding needs a theory. Knowledge modeling, semantics, or ontology construction are areas marked by the absence of significant consensus either in points of theory or scope of application. Even the terminology and success criteria of the somewhat overlapping fields are fragmented. Some approaches to content modeling lay claim to psychological realism, others to inspectability; some are portable, others transparent; some are robust, others logically sound; some efficient, others scalable.

Information access tasks give focus to modeling. It is too much to hope for a set of standards to emerge from the intellectually fairly volatile and fragmented area of semantics or cognitive modeling. But in our application areas - namely, those in the general field of information access - external success criteria are better established. Compromise from theoretical underpinnings in the name of performance

is not only possible but even desirable.

The focus of this symposium are models and model tasks. This symposium aims to bring together researchers that work empirically with any kind of text analysis with the aim of understanding text, and with information-access applications in mind. Participants would be encouraged not only to relate successes their approach has engendered but failures due to lack of knowledge or due to unsatisfactory modeling.

Challenge Questions

- How does my model adjust to a new domain or to previously unknown material?
- How can the knowledge in my model be inspected, assessed, and hand-edited except in a near-full-scale trial?
- How well does the model perform in a large-scale trial? (By any metric!)
- What additional knowledge or theory does my model need to perform better?

Unsatisfactory answers are encouraged if they invite further cooperation between groups!

Organizing Committee

Jussi Karlgren (chair), Swedish Institute of Computer Science (jussi@sics.se); Pentti Kanerva (cochair), CSLI, Stanford University (pkanerva@csl.stanford.edu); Björn Gambäck (cochair), Swedish Institute of Computer Science (gamback@sics.se); Marti Hearst, SIMS, University of California, Berkeley (hearst@sims.berkeley.edu); Robert Hecht-Nielsen, HNC Software (r@hnc.com); Tony Plate, Bios Group (Tony.Plate@biosgroup.com)

Artificial Intelligence and Interactive Entertainment

Interactive, computer-based forms of entertainment, such as computer games, interactive fiction, and software toys, represent a large, technologically-savvy industry that is actively seeking powerful artificial intelligence techniques. Until recently there was little communication between the interactive entertainment industry and the AI research community. As a result, the interactive entertainment industry may be overlooking useful AI techniques developed by the research community and the research community may be overlooking interesting problems and constraints faced by the interactive entertainment industry.

This symposium seeks to continue the interaction between these two communities that has recently begun. Representatives from both the AI research community and the computer games/ interactive entertainment industry are encouraged to participate in the symposium. Questions for this symposium include:

- What AI techniques might be useful in computer games, interactive fiction or software toys?
- What is the current state of the art in interactive entertainment AI?
- What current AI research projects are using commercial interactive entertainment products?
- What important problems and constraints of interactive entertainment are being ignored by the research community?
- Can AI help expand the landscape of computer games, to create compelling games that can be enjoyed by people who do not enjoy the current genres?

- Can we identify problems whose solutions would make a fundamental difference to the game industry, yet could be solved in the near term?
- How can we strengthen the burgeoning relationship between the research and industry communities?

Organizing Committee

Ian Davis, Mad Doc Software; Wolff Dobson, Visual Concepts Entertainment; Magy El-Nasr Seif, Northwestern University (cochair); Ken Forbus, Northwestern University (chair); John Laird, University of Michigan; Lars Linden, Valve Software; Andrew Stern, InteractiveStory.net; Michael van Lent, Institute for Creative Technologies

Collaborative Learning Agents

Recent advances in the multiagent systems (MAS) field have generated optimism that widely applicable solutions to large, distributed problems may be at hand. However, before the field can deliver on that promise, the challenge of how to control such systems to address a pre-specified goal (e.g., minimize throughput of packets in data routing, win the game in soccer) in a decentralized, adaptive manner with minimal detailed hand-tuning needs to be met.

In this symposium we focus on two crucial properties that would allow a MAS to meet those challenges: (1) the agents need to work collectively so that as a group, their behavior solves the overall problem; and (2) both the agents and their collaborative structure need to be adaptive.

The first property is crucial in large problems (e.g., internet routing), and inherently distributed problems (e.g., planetary exploration rovers, constellations of satellites), in that it enables a modular approach to the problem. The importance of the second property lies in how the agents interact with one another and the environment. Because both the environment and the response of other agents to changes in that environment will modify the "background" state one agent perceives before choosing its actions, it is imperative that adaptivity be built in to those agents.

Our focus in this symposium will be to address the design of systems that are intended to solve large distributed computational problems with little to no hand-tailoring through the collective and adaptive behavior of the agents comprising that system. Topics to be discussed at the symposium include:

- Off-equilibrium behavior of Multiagent Systems
- Learning agents in collaborative environments
- Selfish agents that cooperate "unintentionally"
- Formation of teams or coalitions of agents
- Behavior changes in "team player" agents
- Adaptivity in the interaction structure for the agents
- Scaling in collaborative Multiagent Systems
- Applications/limitations of economic principles
- Applications/limitations of game theory

The symposium will include presentations of technical papers, invited talks and a panel discussion.

Organizing Committee:

Kagan Tumer (Cochair), NASA Ames Research Center (kagan@ptolemy.arc.nasa.gov); Peter Stone (Cochair), AT&T Labs-Research (pstone@research.att.com); Piotr Gmytrasiewicz, University of Texas-Arlington (piotr@cse.uta.edu); Amy Greenwald, Brown University (amygreen@cs.brown.edu); Michael Littman, AT&T Labs - Research (mlittman@research.att.com); Akira Namatame, National Defense Academy, Japan (nama@nda.ac.jp); Sandip Sen, The University of Tulsa, (sandip@ens.utulsa.edu); Manuela Veloso, CMU, (Manuela_Veloso@school.coral.cs.cmu.edu); Jose Vidal, University of South Carolina (vidal@sc.edu); David Wolpert, NASA Ames Research Center (dhw@ptolemy.arc.nasa.gov)

Website: www.research.att.com/~pstone/Workshops/2002aai/

Information Refinement and Revision for Decision Making: Modeling for Diagnostics, Prognostics, and Prediction

Many companies have discovered the value of preserving and maintaining their corporate knowledge as they are collecting large amount of process data and business information. This collection is accelerated by the use of advanced and less expensive sensors, massive information storage, and internet-facilitated access. As a result, diagnostic decision makers are faced with the daunting task of extracting relevant morsels from this information hodge-podge, dealing with conflicting information, repudiating stale and outdated information, and evaluating the merits of a found solution. Automated decision-making systems also need to heed the effect of degrees of redundancy in the information considered, which may skew the decision pursued. In addition, temporal effects play a major role in the decision making process not only because information integrity fades over time but also because new information needs to be factored in. Although this new information does not exist at the time of the system design, one must provide a system maintenance plan to account for it. Ways to judge the relevance of this new information and optimization issues need to be discussed in this context. Finally, the quality and uncertainty of the newly found system and its resulting decisions need to be evaluated.

This symposium will explore some of the following topics within that context:

- Conflict resolution
- Information half-life
- Adaptive optimization
- Uncertainty management
- Distributed evolutionary agents
- Temporal information updating
- Distributed resource management

- Aggregation of heterogeneous information
- Distributed multiple hypothesis management
- Automated updating of classification systems
- Postponement of commitments in design analysis
- Interactive tradeoff analysis between search and decision
- Multi-criteria decision making based on changing information

Organizing Committee

Alice Agogino, UC Berkeley (aagogino@euler.me.berkeley.edu); Piero Bonissone, GE Corporate Research & Development (bonissone@crd.ge.com); Kai Goebel, GE Corporate Research & Development (goebelk@crd.ge.com); Soundar R.T. Kumara, Pennsylvania State University (skumara@psu.edu); Karl Reichard, Pennsylvania State University (kmr5@psu.edu); George Vachtsevanos, Georgia Institute of Technology, (george.vachtsevanos@ee.gatech.edu); Xenofon Koutsoukos, Xerox PARC (koutsouk@parc.xerox.com)

Website: www.cs.rpi.edu/~goebel/ss02

Intelligent Distributed and Embedded Systems

This symposium will focus on the emerging challenges associated with large-scale distributed embedded systems for sensing and acting. As embedded sensor/actuator networks become pervasive in everyday life, there is an exciting research opportunity for the AI and Robotics communities to apply their expertise to cope with constrained sensing, noisy communication, and uncertainty which characterize the control and coordination problems in this domain.

The aim of this meeting is to bring together three communities to facilitate this research:

- Distributed AI.
- Distributed Robotics
- Networking and Communications.

The first two communities are well-represented at other AAAI Spring Symposia but the third is traditionally not. We believe this cross-fertilization is important for both sides. It also serves to highlight to the external world, the AI/Robotics impact on Embedded Systems.

The list of accepted abstracts spans the areas of coordination and control of distributed agents, including robots, data dissemination and fusion in embedded sensor networks, sensor networks for novel applications, and programming methodologies and architectures for large-scale, distributed embedded systems.

Organizers

Gaurav S. Sukhatme (gaurav@usc.edu) and
Tucker Balch (tucker@cc.gatech.edu)

Website: robotics.usc.edu/~gaurav/AAAI-Spring-Symposium/abstracts.html

Logic-Based Program Synthesis: State of the Art and Future Trends

"Automatic Programming" has long been considered a core AI task. C. Green's and R. Waldinger's papers at the 1969 IJCAI put it on a firm logical basis and spawned a long line of research. Some logic-based program synthesis systems have been developed and applied to different problem domains (e.g., Amphion, KIDS, Nuprl, Oyster/Clam). Yet, logic-based program synthesis is not a common approach to software development. Why not? The purpose of this symposium is to survey the current state of the art, to identify barriers, and to discuss directions that can help make it more feasible. Key topics include:

Representation of design knowledge: formalizing, organizing, and applying design theories about software architectures, algorithms, data structures, communication protocols, code optimizations, as well as domain-specific design knowledge.

Domains amenable for synthesis: are there some general characteristics that make an application domain more (or less) amenable for logic-based program synthesis? Which domains have been tackled successfully? How is the domain and programming knowledge represented and structured?

Role of synthesis in component-based approaches to system development: deductive support for component reuse, synthesis of data translators and wrappers, composition and refinement of connectors, generation of interaction plans, protocol composition and synthesis.

Issues in constructive theorem-proving: most logic-based program synthesis has focused on witness-finding in first-order logic and prepositional temporal logic. Specialized logic and algebraic the-

ories can have more efficient witness-finding procedures. How can specialized inference systems, such as symbolic-algebraic systems, be integrated and used in synthesis?

Support for certification: software for safety-critical applications is subject to certification, whether it is synthesized or not. How can synthesis support certification? How can the required certificates and documents be extracted from the proof?

The presentations at the symposium show a wide range of different solutions. The approaches are based on a variety of different logic, including time-bounded constructive logic, knowledge logic, temporal logic, as well as classical higher-order logic. A number of system demonstrations show the versatility of program synthesis; demonstrations include the application to UML-design synthesis, application to domains like scheduling and data analysis, and automatic complexity analysis. Invited talks by C. Green, R. Waldinger, and E. Kant survey the historical development and current state of the art, and show the commercial application of synthesis technology to computational finance.

Organizing Committee

B. Fischer (Cochair), RIACS/NASA Ames, USA; D. Smith (Cochair), Kestrel Institute, USA; D. Basin, U. Freiburg, Germany; A. Bundy, U. Edinburgh, UK; Y. Deville, U. Louvain, Belgium; P. Flener, U. Uppsala, Sweden; C. Green, Kestrel Institute, USA; C. Kreitz, Cornell, USA; M. Lowry, NASA Ames, USA; J. Richardson, Herriot-Watt, UK; R. Waldinger, SRI, USA; J. Whittle, QSS/NASA Ames, USA

Website: ase.arc.nasa.gov/aaai2002/

Mining Answers from Texts and Knowledge Bases

The rate of producing textual documents is quite larger than the rate of generating reliable knowledge bases and reasoning mechanisms. However, the information expressed in various on-line textual documents, either on the Internet or in large text repositories cannot be computationally used unless it is associated with expert knowledge bases. The incorporation of textual information into knowledge bases is not simple, due to the multiple forms of ambiguities that characterize natural language texts. However, today we are in the position of having sufficiently large knowledge bases available and the natural language processing technologies have matured enough to process real-world documents and extract information and answer natural language questions with good accuracy.

Part of the recent success of open-domain Q/A is due to novel combinations of technology developed in the 90s (e.g. named entity recognizers) with techniques used in the 80s (e.g. abductive interpretations of texts) and novel indexing/retrieval mechanisms (e.g. passage retrieval). Discovering relevant knowledge from the web can be combined with domain knowledge provided by large-scale knowledge bases (e.g. Cyc, Wordnet, UT's Component Library, IEEE's Standard Upper Ontology effort). Furthermore, textual information extraction techniques can be enhanced by using world knowledge available in large lexicon-semantic knowledge bases.

Achieving orders of magnitude improvement in question answering performance requires us to make synergistic use of these advances. Extraction and text mining methods must make use of knowledge based inference in support of

the extraction task and for post processing the extracted information. Knowledge bases need to rely on large corpuses of knowledge to support their initial creation, and then subsequent testing and maintenance.

The symposium will bring together diverse techniques for text and answer mining from AI (more specifically, natural language processing, machine learning, knowledge representation and reasoning) with information retrieval (from text collections or from the web) or data tracking and detection. The invited talks and contributed papers will focus on topics such as common sense knowledge bases, linguistic knowledge bases, use of dialog in query formulation, inference and query evaluation techniques, and techniques for competence evaluation of question answering systems.

Organizing Committee

Sanda Harabagiu (Cochair), Southern Methodist University; Vinay Chaudhri (Cochair), SRI International; Bruce Porter, University of Texas Austin; Ray Mooney, University of Texas Austin; Tom Mitchell, Whizbang! and Carnegie Mellon University; Claire Cardie, Cornell University; Richard Fikes, Stanford University; Dan Moldovan, Southern Methodist University; Srinivas Narayanan, SRI International; Donna Harman, NIST.

Safe Learning Agent

Since Weld and Etzioni's "The First Law of Robotics" at AAAI in 1994, there has been growing concern with the safety of deploying intelligent agents in the real world. Perhaps HAL in Kubrick's *2001: A Space Odyssey* is the best image of such an agent gone wrong.

One area often missing from such discussions is the safety of learning agents. This is an important omission since learning/adaptation is a component in most definitions of what it means to be an agent. Some recent work has begun to address some of the issues involved, but the field is still in the initial stages of defining the problem.

A safe agent is one which can efficiently find and execute acceptable solutions for its target problems. Learning can adversely affect which problems the agent can solve, the efficiency with which they come up with plans to solve them, and the quality of the solutions. Thus learning can cause a "safe" agent to become "unsafe."

Since we would like the agents to learn from their environment, either the agent must be able to quickly/cheaply check that its new learning hasn't made it unsafe or the learning method must guarantee that it will preserve the agent's safeness.

Unfortunately, it is unlikely that for problems in general, that any learning method would be able to guarantee it won't decrease coverage, efficiency, and solution quality. So, at least initially, we must identify learning methods that make guarantees with respect to at least one of the performance dimensions and/or with respect to some restricted class of problems. While it may not be possible to guarantee monotonicity for

these performance dimensions, we may be able to bind the degradation for some of these.

In this symposium we are interested in peoples' experiences with agent learning going wrong, how to prevent it, and with what end-users both want and fear from learning agents. Our invited speakers, Milind Tambe (ISI/USC), Johann Schumann (NASA Ames) and Steve Chien (JPL) cover these topics. Milind Tambe will describe problems (and some solutions) he's encountered with his learning agents. Johann Schumann will discuss formal approaches to preventing learning from going wrong. Steve Chien will look at the advantages and possible problems of having learning agents in Space.

An important part of this symposium will be group discussions on the different types of agent safety affected by learning, tradeoffs involved in making learning agents safe, applications where safe learning is critical, etc.

Organizing Committee

Mike Barley (cochair), University of Auckland, New Zealand (barley@cs.auckland.ac.nz); Hans W. Guesgen (cochair), University of Auckland, New Zealand (hans@cs.auckland.ac.nz); Ella M. Atkins, University of Maryland (atkins@eng.umd.edu); Diana Gordon, Naval Research Laboratory (gordon@aic.nrl.navy.mil); Daniel G. Shapiro, Stanford University (dgs@stanford.edu)

Sketch Understanding

As computation becomes pervasive and embedded, people are becoming increasingly dissatisfied with WIMPy interfaces. If it's absurd to suggest to people that they interact with one another by sitting at a computer and silently typing, clicking, and dragging, why then do we interact with our software this way?

Researchers in a variety of contexts are working to enable more natural forms of interaction in a variety of modalities. This symposium will focus on sketch understanding as one such form of natural interaction.

By "sketch" we mean an informal drawing created with pen strokes. By "understanding" we mean reliably identifying the objects or concepts suggested by the pen strokes, despite the inaccuracies and ambiguities inherent in the medium. One measure of understanding is the ability to answer questions about the things depicted. Understanding a sketch of a physical device, for example, means being able to answer questions about how the device operates, what it might be useful for, how it might be constructed, etc.

This symposium will consider all of the different levels of sketch understanding, starting with the low-level gathering and processing of pen signals up to the high-level reasoning about the things depicted. We have two primary objectives in mind: first, the dissemination of initial research results from the small but growing community of researchers working in this area, and second, establishing a research agenda for the field.

We welcome technical papers describing proposed or completed research activities; scene setting papers describing the history of the field and the current

landscape; position papers outlining a research agenda for the field; position papers evaluating current ideas and approaches; interactive software and hardware demonstrations; or suggestions for panel discussions.

The symposium will culminate with a collaboratively produced, refined research agenda.

Organizing Committee

Tom Stahovich (cochair), Carnegie Mellon University (stahov@andrew.cmu.edu); Randall Davis (cochair), Massachusetts Institute of Technology (davis@ai.mit.edu); James Landay (cochair), University of California, Berkeley (landay@cs.berkeley.edu)

Registration and General Information

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, 2002. 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, 2002.

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

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

AAAI 2002
Spring Symposium Series
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Menlo Park, CA 94025

If you are paying by credit card, you may e-mail the form to sss@aaai.org or fax it to 650-321-4457. Registration forms are also available on AAAI's web page: www.aaai.org/Symposia/Spring/sssregform.html or [sssregform.pdf](#).

Please note: All refund requests must be in writing and postmarked by March 8, 2002. No refunds will be granted after this date. A \$25.00 processing fee will be levied on all refunds granted.

When you arrive at Stanford, please pick up your complete registration packet from the Spring Symposium Series 2002 registration desk, in the Cummings Art Building.

Registration hours will be:

Monday, March 25

8:00 AM - 5:00 PM

Tuesday, March 26

8:30 AM - 5:00 PM

Wednesday, March 27

8:30 AM - 12:00 PM

Please call AAAI at 650-328-3123 for further information.

Parking

Special symposium parking will be available on the Stanford Campus, March 25-27, at a cost of \$10.00 for all three days. Please indicate on the symposium registration form if you would like a parking permit. The permits will be mailed to you with your registration receipt, along with a map and directions to the assigned parking areas. Please note that parking permits are valid only in designated areas. You will need to take the campus shuttle (Marguerite) to the Spring Symposium registration area and sessions. Please allow an extra thirty minutes travel time in your schedule for the shuttle.

Accommodations

For your convenience, AAAI has reserved a block of rooms at the hotels listed below. Symposium attendees must contact the hotels directly. Please identify yourself as an AAAI Spring Symposium Series attendee to qualify for the reduced rates.

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Fax: 650-852-9500
Marguerite shuttle pick-up: 0.5 mile
Rates: \$149 (S), \$169 (D)
Reserve before: February 24, 2002

Sheraton Palo Alto
625 El Camino Real
Palo Alto, CA 94301
Phone: 650-328-2800 or 800-874-3516
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Marguerite shuttle stop nearby
Rate: \$179 (S) or (D)
Reserve before: February 22, 2001

Stanford Terrace Inn
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Phone: 650-857-0333
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Fax: 650-857-0343
Stanford Terrace Shuttle available with
advance notice. Marguerite shuttle stop
nearby
Rates: \$150 (S), \$170 (D)
Reserve before: February 24, 2001

Other Hotels

(Available only on a first-come, first
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The Cardinal Hotel
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Phone: 650-323-5101
Fax: 650-325-6086
Marguerite shuttle stop nearby
Rates: \$125 (S) or (D)

Hotel California
2431 Ash Street
Palo Alto, CA 94306
Phone: 650-322-7666
Fax: 650-321-7358
Marguerite shuttle stop nearby
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United Airlines (1-800-521-4041)—ID
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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.

South Bay Shuttle

Van service from San Francisco Airport to Palo Alto is \$17 for one person one way plus \$5 per additional person. The fare from San Jose Airport to Palo Alto \$25 per person plus \$5 per additional person. Cash or checks only. For reservations call 408-559-9477 or 1-800-548-4664.

Supershuttle

24 hour van service to and from San Francisco to Palo Alto. The fare from San Francisco Airport to Palo Alto is \$26 per person one way plus \$8 per additional passenger. Cash or major credit cards only. For reservations call 415-558-8500 or 1-800-258-3826 (outside California). Reservations can also be made over the web at www.supershuttle.com

Airport Commuter

Service is \$58 from San Francisco Airport to Palo Alto. The fare from San Jose Airport to Palo Alto is \$68. Cash, major credit cards, or checks accepted. Call 1-888-990-5466 for reservations. 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.

Train

CalTrain runs between San Francisco and Palo Alto station starting at 5:00 am with the last train leaving San Francisco at 12:00 PM (weekdays). The fare is \$4.00 one way. For up-to-date fare information and timetables, call toll free 800-660-4287.

Registration Form—2002 AAI Spring Symposium Series

ALL ATTENDEES MUST PREREGISTER

Please complete in full and return to AAI, postmarked by February 15, 2002 (invited attendees), or by March 1, 2002 (general registration).

Please print or type—incomplete or illegible forms cannot be processed.

FIRST NAME _____ LAST NAME _____

COMPANY OR AFFILIATION _____

ADDRESS: _____ HOME OR BUSINESS

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Symposium

(Please check only one)

- 1. Acquiring (and Using) Linguistic (and World) Knowledge for Information Access
- 2. Artificial Intelligence and Interactive Entertainment
- 3. Collaborative Learning Agents
- 4. Information Refinement and Revision for Decision Making
- 5. Intelligent Distributed and Embedded Systems
- 6. Logic-Based Program Synthesis: State of the Art and Future Trends
- 7. Mining Answers from Texts and Knowledge Bases
- 8. Safe Learning Agents
- 9. Sketch Understanding

Fee

- Member: \$ 220.00 Nonmember: \$ 295.00
- Student Member: \$ 100.00 Student nonmember: \$ 145.00
(students must send legible proof of full-time student status)
- Temporary Stanford University parking permit, March 25–27 (\$10.00)

TOTAL FEE (Please enter correct amount) \$ _____

Method of Payment (please circle one)

(All e-mail and fax registrations must be accompanied by credit card information. **Prepayment is required. No PO's will be accepted.**)

Check MasterCard VISA American Express

Credit card account number _____

Expiration date _____

Name (as it appears on card) _____

Signature _____

Please mail or fax completed form with your payment to

AAAI, SSS-2002 • 445 Burgess Drive • Menlo Park, California 94025 • 650-321-4457

Please Note: Requests for refunds must be received in writing by

March 8, 2002 No refunds will be granted after this date.

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

Thank you for your registration!

