

AAAI News

*Summer News from the
American Association for Artificial Intelligence*

AAAI Annual Business Meeting

The annual business meeting of the American Association for Artificial Intelligence will be held at 12:45 PM, Thursday, July 29, 2004 in the San Jose McEnery Convention Center in San Jose, California.

Artificial Intelligence Journal Online Access

AAAI is delighted to continue its cooperative effort with *AI Journal*, giving unlimited access to the online version of the *Artificial Intelligence Journal* to all regular AAAI members. AAAI regular members can view and browse tables of contents, view articles published in recent issues of *AI Journal*, and use the current features available through Elsevier's electronic journal service. They may also view, print, and/or download excerpts of reasonable quantity, provided that the use of such excerpts is personal and does not amount to, or result in, commercial distribution. Participation in this program is included in your normal AAAI membership dues.

If you are a current regular member, you can use your AAAI membership number to log on to the journal at <https://cs.sciencedirect.com/activate/artint/members>. If you need your AAAI membership number, please write to membership04@aaai.org. For customer service for the *AI Journal*, please write to usinfo@sciencedirect.com.

AI ALERT Newsletter

Many of you have been receiving the *AI ALERT* newsletter by e-mail, which highlights selected features from the "AI in the News" section of the AI Topics web pages. The newsletter will now be available only on the web (see www.aaai.org/aitopics/assets/AIalerts/current.html). If you are a member of AAAI and would like to be notified when a new edition of *AI Alert* has been posted, and also receive other AAAI announcements, please subscribe to our AAAI membership list server by writing to majordomo@aaai.org with the following text in the BODY of the message: subscribe aaai-members.

AAAI Executive Council Nominations

Every two years, the AAAI membership elects an individual to serve a two-year term as president-elect, followed by two years as president, and, finally, two years as immediate past president. In addition, every year four new councilors are elected to serve three-year terms on the AAAI Executive Council. The AAAI nominating committee encourages all regular members in good standing to place an individual's name before them for consideration. The nominating committee, in turn, will nominate one candidate for president-elect and eight candidates for councilor in the spring. In addition to members' recommendations, the committee will actively recruit individuals in order to provide a balanced slate of candidates. AAAI

members will vote in the late spring of 2005.

To submit a candidate's name for consideration, please send the individual's name, address, telephone number, and e-mail address to Carol Hamilton, Executive Director, AAAI, 445 Burgess Drive, Menlo Park, CA 94025; by fax to 650/321-4457; or by e-mail to hamilton@aaai.org. Nominators should contact candidates prior to submitting their names to verify that they are willing to serve, should they be elected. The deadline for nominations is November 1, 2004.

2004 AAAI Fall Symposium Series

The 2004 AAAI Fall Symposium Series will be held Friday through Sunday, October 22–24, 2004, at the Hyatt Regency Crystal City in Washington, DC. The AAAI Fall Symposium Series will be preceded on Thursday, October 21, by a one-day AI funding seminar, which will be open to all registered attendees of the Fall Symposium series. The titles of the eight symposia are as follows:

- Achieving Human-Level Intelligence through Integrated Systems and Research. *Cochairs:* Patrick Winston (phw@mit.edu) and Nicholas Cassimatis (cassimatis@itd.nrl.navy.mil)
- Artificial Multiagent Learning. *Chair:* Sean Luke (sean@cs.gmu.edu)
- Compositional Connectionism in Cognitive Science. *Cochairs:* Simon Levy (levys@wlu.edu), Ross Gayler (r.gayler@mbox.com.au), and Pentti Kanerva (pkanerva@rni.org)
- Dialogue Systems for Health Communications. *Chair:* Timothy Bickmore (bickmore@bu.edu)
- The Intersection of Cognitive Science and Robotics: From Interfaces to Intelligence. *Chair:* Alan Schultz (schultz@aic.nrl.navy.gov)
- Making Pen-Based Interaction Intelligent and Natural. *Chair:* Randall Davis (davis@csail.mit.edu)
- Real-Life Reinforcement Learning. *Cochairs:* Michael Littman ([Copyright © 2004, American Association for Artificial Intelligence. All rights reserved. 0738-4602-2004 / \\$2.00](mailto:mlit-

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Congratulations to the 2004 AAAI Fellows!

Each year, a small number of fellows are recognized for their unusual distinction in the profession and for their sustained contributions to the field for a decade or more. An official dinner and ceremony will be held in their honor at AAAI-04 in San Jose, California.



Subbarao Kambhampati, *Arizona State University*

For significant contributions to a unified theory of planning, its relation to constraint satisfaction, and development of varied speedup methods and heuristics.



Craig A. Knoblock, *University of Southern California*

For significant contributions to planning and information integration and the application of AI methods to complex domains.



Daphne Koller, *Stanford University*

For significant contributions to the integration of logic and probability and development of methods for reasoning, learning, and decision making under uncertainty.



Gérard G. Medioni, *University of Southern California*

For significant contributions to computer vision, including algorithms for feature extraction, organization, and matching.



Stuart M. Shieber, *Harvard University*

For significant contributions to the foundations of computational linguistics, to graphical and spoken-language interfaces, and to open scientific publishing.



Moshe Y. Vardi, *Rice University*

For significant contributions to the development of automated-reasoning techniques and to the development of logic as a unifying foundational framework and a tool for modeling computational systems.

tman@cs.rutgers.edu) and Satinder Singh (baveja@eecs.umich.edu)

- **Style and Meaning in Language, Art, and Music.** *Cochairs:* Shlomo Argamon (argamon@iit.edu) and Shlomo Dubnov (dubnov@bgu-mail.bgu.ac.il)

Symposia will be limited to between 40 and 60 participants each. In addition to invited participants, a limited number of other interested parties will be able to register in each

symposium on a first-come, first-served basis. Complete registration and hotel information will be available in July at www.aaai.org/Symposia/Fall/2004/fss-04.html. Invited participants must register by September 10, and the final registration deadline is October 1. The deadline for hotel reservations at the Hyatt is September 27, 2004. The discounted single room rate of \$139.00 per night (\$175.00/double) might not be avail-

able after this date. Please call the Hyatt Regency at 800-233-1234 or 703-418-1234 for reservations, and be sure to identify yourself as an attendee at the American Association for Artificial Intelligence Fall Symposium Series.

2004 Spring Symposium Series

The 2004 Spring Symposium Series will be held March 21–23, 2005 at Stanford University. The Call for Participation will be available in July on the AAAI web site (www.aaai.org/Symposia/symposia.html) and will be distributed at AAAI-04. Submissions will be due to the organizers on October 8, 2004.

ACM/AAAI Allen Newell Award

AAAI is pleased to announce the recipients of the 2003 ACM/AAAI Allen Newell Award. The ACM/AAAI Allen Newell Award is presented annually to an individual(s) whose career contributions display breadth within computer science, or bridge computer science and other disciplines. The award is sponsored by AAAI and ACM. This year the Allen Newell Award is given to two computer scientists whose remarkable influence both within and outside the field is in the best traditions of this award and of Allen Newell's own career. David Hausler is being honored for exceptional contributions bridging computer science and biology through research in computational learning theory, computational biology, and bioinformatics leading to major influences on the understanding of biological macromolecules and the investigation of the human genome. Judea Pearl is being honored for seminal contributions to artificial intelligence and, in turn, its applications, by building a firm mathematical and theoretical foundation through ground-breaking work in heuristic search, reasoning under uncertainty, constraint processing, nonmonotonic reasoning, and causal modeling.

Royal Swedish Academy Honor

Wolfgang Wahlster, professor of computer science at Saarland University and director of the German Research Center for Artificial Intelligence (DFKI), was elected to membership in the Royal Swedish Academy of Sciences and the German Academy of Natural Scientists Leopoldina. Founded in 1739, the Royal Swedish Academy of Sciences awards the Nobel Prizes in Physics and Chemistry, the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel. Being elected a member of the Academy constitutes exclusive recognition of successful research achievements. The Academy has about 350 Swedish members. There are also 164 foreign members. Wolfgang Wahlster is one of the ten foreign members of the class for engineering sciences and the only foreign computer scientist in the Academy. Founded in 1652, the German Academy of Natural Scientists Leopoldina is among the world's oldest learned societies. Members included Albert Einstein, Johann Wolfgang von Goethe, Marie Curie, Charles Darwin, Alexander von Humboldt, Max Planck, Konrad Zuse, and more than 150 nobel prize laureates.

In Memoriam

Robin John Popplestone, one of the early pioneers in robotics and computer programming languages, died on April 14, 2004, in Glasgow, Scotland. Popplestone was a professor emeritus of computer science at the University of Massachusetts at Amherst, where he had codirected the Laboratory for Perceptual Robotics. Prior to that he had been a reader in AI at the University of Edinburgh. In 1990, he was selected as a founding fellow of the American Association for Artificial Intelligence in recognition of his seminal contributions to AI. He had wide-ranging research interests, including geometric reasoning, assembly planning, and visual serving.

Azriel Rosenfeld passed away on February 22, 2004. Rosenfeld was a tenured research professor, a distin-

guished university professor, and director of the Center for Automation Research at the University of Maryland in College Park, where he also held affiliate professorships in the Departments of Computer Science, Electrical Engineering, and Psychology. Rosenfeld was widely regarded as the leading researcher in the world in the field of computer image analysis. He was a founding fellow (1990) of the American Association for Artificial Intelligence.

The Way to San Jose: 2004 National AI Conference to Be Held in Silicon Valley

Sara Reese Hedberg

Returning to the spawning grounds of the digital revolution—the Silicon Valley—AAAI's Nineteenth National Conference on Artificial Intelligence (AAAI-04) and Sixteenth Innovative

The Architecture, Implementation, and Operation of Conscious Machines

Robert S. Grondalski
Member AAAI



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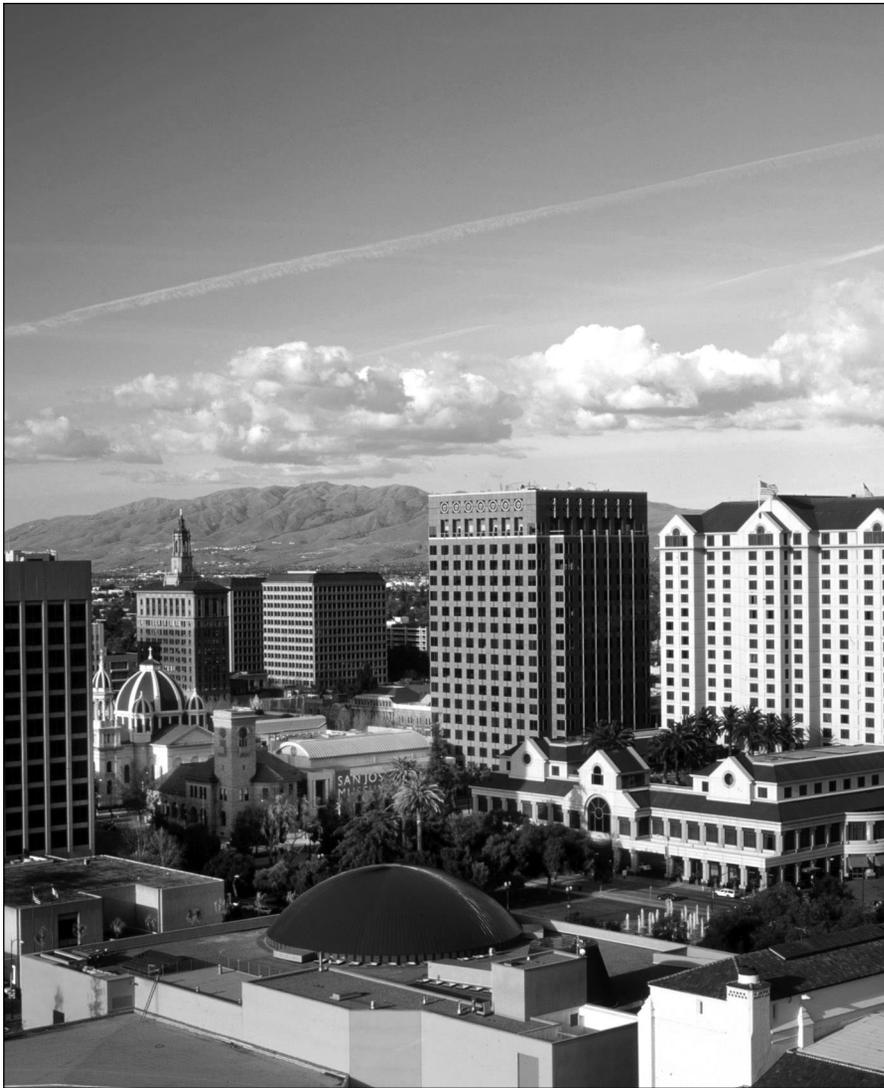
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Applications of AI Conference (IAAI-04) will be held at the San Jose Convention Center from July 25–29, 2004. Information about the various components of the conference and registration information can be found at www.aaai.org/Conferences/conferences.html. (*Note:* This year we've decided to forego printing the conference brochure—information and registration are all online.)

A Stellar Slate of Invited Speakers

The list of invited speakers available at press time promises some highly thought-provoking and informative talks from industry pioneers. The caliber of the speakers and the range of cutting-edge topics being presented are a testimony to the sustained high quality of the conference again this year. Among the featured presentations are the following:

■ Intelligent Systems and the Na-



San Jose's vibrant downtown offers a wealth of activities for AAAI-04 Conference attendees. (Photo courtesy San Jose Convention and Visitor's Bureau.)

tion's Vision for Space Exploration. *Dan Clancy*, NASA-Ames (acting director for Information Sciences and Technology Directorate (infotech.arc.nasa.gov/org/management.html)).

Over the past few months, NASA has been in the news for the discoveries of the Mars Rovers as well as the country's vision for space exploration. This vision focuses on the joint human and robotic exploration of the solar system, starting with a return to the moon and then the human exploration of Mars. In addition, the vision includes a continued array of exciting robotic missions to Mars as well as other destinations. Future human exploration will require a

new level of technology enabling NASA to deploy smarter, more adaptive systems. These systems must be designed to complement their human partners. In this talk, Clancy will present a brief overview of the new vision and then will speak in depth about a range of advanced AI technologies that have been developed, and in some cases deployed, on NASA missions.

■ **Intelligent Technology for Adaptive Aging.** *Martha E. Pollock*, professor of electrical engineering and computer science, University of Michigan.

The world's population is rapidly aging, and some are predicting a coming "crisis in caregiving." Intelligent

technologies have the potential to help avoid this crisis by providing people with ways to adapt to the physical and cognitive changes that can accompany aging. Pollack will survey the state of the art in such technology, highlight the important role of AI techniques in its design, and describe open research challenges. Pollack recently testified before the U.S. Senate Aging Committee and worked on the National Academies report on technology and adaptive aging.

■ **Human Dynamics.** *Alex (Sandy) Pentland*, director of human dynamics research at the MIT Media Lab (www.media.mit.edu/people/bio_sandy.html).

Important and complex discussions are almost always face to face, with little or no technology intervention. The result is that current computer and communication tools are largely restricted to mechanizing back-office and support functions. Pentland believes that we can radically improve the functioning of organizations through active analysis of face-to-face interactions. By using wearable machine perception to characterize, annotate, and influence face-to-face interactions, we can augment peoples' memory, initiate productive interactions, improve group decision making, and better understand and manage the functioning of distributed work force. Examples of each type of augmentation will be shown, and privacy concerns addressed.

■ **The Power of "Clear and Demonstrative Knowledge":** In Honor of a "True Son of Science," The Robert S. Englemore Memorial Lecture. *Edward Feigenbaum*, Stanford University Kumagai Professor of Computer Science and coscientific director of the Knowledge Systems Laboratory (ksl-web.stanford.edu/people/eaf/).

This talk, given to honor the memory and work of Robert S. Englemore by colleague and close friend Ed Feigenbaum, revisits some of the themes that were central to his work by giving them a contemporary context. What is an up-to-date view of the "knowledge is power" hypothesis?

What about knowledge webs, new applications of knowledge-based systems, and particularly the blackboard-architectures that Englemore helped to develop?

■ **Building a Life Science Company around Statistical Machine Learning.** *Astro Teller*, cofounder, chairman and CEO of BodyMedia (Pittsburgh, Pennsylvania).

Teller will tour through five years of challenges and discoveries building a wearable body monitoring business using statistical machine learning techniques. The talk will cover challenges gathering data, building body-state models, validating the models with the medical community, and placing AI within the larger context of the company and the industry. For more information, see www.bodymedia.com/press/astro.jsp and www-2.cs.cmu.edu/afs/cs/usr/astro/mosaic/astro-papers.html.

■ **Strength of Character: AI Personalities in Video Games.** *Ian Lane Davis*, CEO and mad scientist, Mad Doc Software (www.maddocsoftware.com/company/the_team.asp). Lane will examine what he calls the “upcoming great frontier in AI” — the construction of believable characters in video games.

Although the title of his talk was not available at press time, Peter Norvig, Google director of search quality (www.norvig.com/) will also present an invited talk.

A Wealth of Content

Once again, in 2004, the conference offers a wealth of content to conference attendees. The Thirteenth Annual Mobile Robot Competition and Exhibition will bring together teams from universities, colleges and research laboratories to compete and demonstrate state-of-the-art research in robotics and AI. There will be three events: (1) the Robot Challenge, wherein the competing robots are supposed to register, volunteer, and give a talk at the conference; (2) the Rescue Robot Competition, which challenges robots in a simulated fallen structure to find human victims and direct human rescuers to the victims; and (3) the Open Interaction Task, which involves human-robot

interaction in an unstructured environment. In addition, The Robot Exhibition will provide a venue to showcase current robotics and embodied AI research that does not fit into the competition tasks.

IAAI-04

The Sixteenth Innovative Applications of Artificial Intelligence Conference (IAAI-04) continues the long, highly regarded tradition of presenting new and emerging applications of AI technology; exploring issues, methods, and lessons learned in the development and deployment of AI applications; and promoting an interchange of ideas between basic and applied AI. Twenty-four papers were accepted for the conference, including four fully deployed applications and twenty emerging applications which, although not deployed, show tremendous promise.

Two of the deployed applications come out of Detroit—one from General Motors and one from Ford Motor Company, both long-time investors in AI technology and innovations. Michigan is further represented by the University of Michigan with three emerging applications that all stem from the SOAR intelligent agent (sitemaker.umich.edu/soar).

Also among the emerging applications are four systems that come from other countries—Italy, Ireland, Canada and China. Although much of the AI work being applied to counterterrorism remains sheathed in secrecy, several efforts will find the light of day for the conference, such as the paper from SRI and Palo Alto Research Center, “Identifying Terrorist Activity with AI Plan-Recognition Technology.” AI is also making forays into the health care system. Two papers profile some of this work: “A Robotic Wayfinding System for the Visually Impaired” (from Utah State University), and “The Independent LifeStyle Assistant™” (from Honeywell Labs). A host of other IAAI papers—such as “Synthetic Adversaries for Urban Combat Training,” “... Scheduling Earth-Observing Satellites,” and “Automatic Generation of Artistic Chinese Calligraphy”—promise a wealth of choices for IAAI attendees.

AAAI-04 Technical Program

The 120 accepted papers that will be presented in the AAAI-04 Technical Program cover a broad array of research topics. A full list of the accepted papers can be found at www.aaai.org/Conferences/National/2004/aaai04.html.

Tutorial Forum

The focused Tutorial Forum features eleven four-hour tutorials and two eight-hour tutorials that offer researchers an opportunity to explore advances in disciplines outside their normal focus. These tutorials are led by some of the most highly regarded AI researchers, including Barbara Grosz, John Koza, John Laird, and Jon Doyle. More detailed information on the tutorials can be found at www.aaai.org/Conferences/National/2004/Tutorials/aaai04-tutorials.html.

The 2004 Workshop Program

This year’s AAAI workshop program includes sixteen workshops on a variety of topics. Participation is by invitation only, and preregistration is required. For further information, see www.aaai.org/Workshops/2004/ws-04.html.

Demonstrations of Intelligent Systems

Giving researchers an opportunity to show their research in action, the AAAI Intelligent Systems Demonstrations will also be held again this year. This program provides conference attendees with a fascinating way to get an up-close look at a particular system, and to ask developers questions about their work.

Vacation, Anyone?

Once the conference is over, San Jose is a great launching spot for a number of terrific vacation spots throughout California. Head north to San Francisco, the wine country, or the rugged Mendocino coast; head east to the gold country, the high sierras, Yosemite, and Lake Tahoe; or head south to Carmel, Los Angeles, or San Diego. The vacation opportunities are as plentiful as the offerings at this year’s AAAI/IAAI-04 conferences.