Based on an original photograph courtesy, Jeremy Edwards.

Conference Program

Twenty-Third AAAI Conference on Artificial Intelligence (AAAI-08)

Twentieth Conference on Innovative Applications of Artificial Intelligence (IAAI-08)

July 13 – 17, 2008
Hyatt Regency McCormick Place
Chicago, Illinois

Sponsored by the
Association for the Advancement of Artificial Intelligence

Cosponsored by Microsoft Research, National Science Foundation, Google, Inc., Michael Genesereth, NASA Ames Research Center, Yahoo! Research Labs, Intel, Naval Research Laboratory, University of Southern California/Information Sciences Institute, Boeing, IBM Research, Toyota Motor Engineering and Manufacturing North America Inc., Cornell University Intelligent Information Systems Institute, D. E. Shaw, and ACM/SIGART

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Acknowledgments

The Association for the Advancement of Artificial Intelligence acknowledges and thanks the following individuals for their generous contributions of time and energy to the successful creation and planning of the Twenty-Third AAAI Conference on Artificial Intelligence and the Twentieth Conference on Innovative Applications of Artificial Intelligence.

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Julie Weber, University of Michigan

A complete listing of the AAAI-08 and IAAI-08 Program Committee members appears in the conference proceedings.

Awards

All AAAI-08, IAAI-08, and AAAI Special Awards will be presented Tuesday, July 15, 8:30–9:00 AM, in the Regency Ballroom (second floor of the Hyatt).

AAAI-08 Awards

The AAAI-08 Awards will be presented by program cochairs Dieter Fox and Carla Gomes.

AAAI-08 Outstanding Paper Awards

How Good is Almost Perfect?
Malte Helmert and Gabriele Röger
(Albert-Ludwigs-Universität Freiburg)

Optimal False-Name-Proof Voting Rules with Costly Voting
Liad Wagman and Vincent Conitzer (Duke University)

Honorable Mention

On the Progression of Situation Calculus Basic Action Theories: Resolving a 10-year-old Conjecture
Stavros Vassos and Hector J. Levesque
(University of Toronto)

AAAI-08 Outstanding Senior Program Committee Member Award

Richard Korf (University of California, Los Angeles)

AAAI-08 Outstanding Program Committee Member Award

Carlos Linares (Universidad Carlos III de Madrid)

IAAI-08 Awards

Deployed Applications Awards

The four IAAI-08 Deployed Application Awards will be announced by the IAAI-08 chair Mehmet Göker and cochair Karen Haigh. Please see the schedule for paper titles. Certificates will be presented during paper sessions.

Robert S. Engelmore Memorial Award and Lecture

The Robert S. Engelmore Award is sponsored by IAAI-08 and *AI Magazine,* and will be presented by Mehmet Göker and Karen Haigh, IAAI-08 chair and cochair, and David B. Leake, *AI Magazine* editor-in-chief. The award and lecture was established in 2003 to honor Dr. Engelmore's extraordinary service to AAAI, *AI Magazine,* and the AI applications community, and his contributions to applied AI. The 2008 award will be presented to Kenneth M. Ford, Florida Institute for Human & Machine Cognition (IHMC) for leadership in AI science and technology through establishing and guiding AI research centers and programs, pioneering contributions to areas such as human-centered computing, and advancement of AI as a scientific endeavor and enabler for society's goals. The lecture will be held Wednesday, July 16, 10:20 AM, in the Regency Ballroom on the second floor of the Hyatt. This award is sponsored jointly by the Innovative Applications of Artificial Intelligence Conference and the *AI Magazine.*

AAAI Special Awards

The AAAI Special Awards will be presented by Alan Mackworth, Awards Committee chair and AAAI past president, and Eric Horvitz, AAAI president.

Classic Paper Award

The 2008 AAAI Classic Paper award honors the authors of the paper(s) deemed most influential from the Eighth National Conference on Artificial Intelligence, held in 1990 in Boston, Massachusetts.

Solving Large-Scale Constraint Satisfaction and Scheduling Problems Using a Heuristic Repair Method
Steven Minton, Mark D. Johnston, Andrew B. Philips, and Philip Laird

Honorable Mention

Learning to Coordinate Behaviors
Pattie Maes and Rodney A. Brooks

Distinguished Service Award

The AAAI Distinguished Service award recognizes one individual each year for extraordinary service to the AI community. The 2008 recipient is Ronald J. Brachman, Vice President, Worldwide Research Operations, Yahoo! Research, for his contributions to the field of artificial intelligence through sustained service in numerous leadership roles in industry, government and professional societies, tirelessly instigating, facilitating and promoting successful AI research and development.

AAAI Fellows Recognition

Each year, the Association for the Advancement of Artificial Intelligence recognizes a small number of members who have made significant sustained contributions to the field of artificial intelligence, and who have attained unusual distinction in the profession. AAAI is pleased to announce the eight newly elected Fellows for 2008, who will be honored during the annual Fellows dinner on Tuesday, July 15:

Yoav S. Freund
(University of California, San Diego)

Maria L. Gini (University of Minnesota)

Lydia E. Kavraki, (Rice University)

Tuomas Sandholm (Carnegie Mellon University)

Peter van Beek (University of Waterloo)

Toby Walsh (NICTA and University of New South Wales)

Brian C. Williams
(Massachusetts Institute of Technology)

Michael John Wooldridge
(University of Liverpool)

IJCAI-*JAIR* Best Paper Prize

The IJCAI-JAIR Best Paper Prize, which will be presented by Toby Walsh, editor-in-chief of *JAIR*, is awarded to an outstanding paper published in *JAIR* in the preceding five calendar years. The award is presented to:

Pure Nash Equilibria: Hard and Easy Games
G. Gottlob, G. Greco and F. Scarcello (2005).

JAIR 24 (2005), 357-406

Honorable Mention

Towards Understanding and Harnessing the Potential of Clause Learning
P. Beame, H. Kautz and A. Sabharwal (2004).

JAIR 22, 319-351

Presidential Address

Eric Horvitz
(Microsoft Corporation)
Tuesday, July 15, 9:00 – 10:00 AM

Regency Ballroom

Eric Horvitz is a principal researcher and research area manager at Microsoft Research. He has had a lifelong interest in perception, reasoning, and action under uncertainty. He has pursued insights about intelligence via studies of inference and decision making under limited and varying computational resources, including investigations of bounded optimality, value of computation, utility-theoretic metareasoning, and flexible procedures and representations. His current interests span theoretical and practical challenges in machine reasoning and learning, principles of human-computer collaboration, and search and information retrieval. Before his service as AAAI president, he was elected a Fellow and is a past councilor of the organization. He has been chair of the Association for Uncertainty and Artificial Intelligence (AUAI), and has served on the DARPA Information Science and Technology Study Group (ISAT), and the Naval Research Advisory Committee (NRAC). He has been active on numerous editorial boards and program committees and with the organization of multiple conferences and workshops. He received his Ph.D. and M.D. degrees at Stanford University.

Social Events

Opening Reception

The AAAI-08 Opening Reception will be held Monday, July 14, 6:00–7:00 PM in the Regency Ballroom of the Hyatt Regency McCormick Place. This event will provide the traditional opportunity for attendees to socialize in a relaxed setting prior to the beginning of the first day of technical sessions. A variety of hors d'oeuvres and a no-host bar will be available. Admittance to the reception is free to AAAI-08 registrants. A $35.00 per person fee ($10.00 for children) will be charged for spouses and other nontechnical conference registrants.

AAAI-08 Poster / Demonstration Reception

A conference-wide poster and demonstration session will be held on Wednesday, July 16, 6:00 – 9:30 PM in the Regency Ballroom of the Hyatt and will feature AAAI-08 Technical Posters, Short Papers, AI Teaching Forum posters, Student Abstracts, Doctoral Consortium Abstracts, and Intelligent Systems Demonstrations. (For a complete listing of posters, please refer to page 16–17.) The accompanying reception will include a light dinner buffet and a no-host bar. Admittance to the reception is free to AAAI-08 registrants. A $50.00 per person fee ($15.00 for children) will be charged for spouses and other nontechnical conference registrants.

Workshop Program

The Workshop Program will be held July 13–14. Registration for a workshop requires a supplemental fee for AAAI-08 technical registrants. Individuals who do not wish to participate in any other AAAI-08 programs or events may elect the workshop only registration fee. Workshops will be held in the Hyatt Regency McCormick Place Conference Center.

Sunday and Monday

W7: Metareasoning: Thinking about Thinking

Organizers: Michael Cox and Anita Raja (CC10C, First Floor)
8:30 AM – 5:15 PM

W9: Multidisciplinary Workshop on Advances in Preference Handling

Organizers: Jan Chomicki, Vincent Conitzer, Ulrich Junker, and Patrice Perny (CC11B, First Floor)
8:30 AM – 6:00 PM

W10: Search in Artificial Intelligence and Robotics

Organizers: David Furcy, Sven Koenig, Wheeler Ruml, and Rong Zhou (CC21, Second Floor)
9:00 AM – 8:00 PM (Sunday)
8:50 AM – 6:00 PM (Monday)

Sunday

W2: AI Education Colloquium

Organizers: Zach Dodds, Haym Hirsh and Kiri Wagstaff (CC11A, First Floor) 9:00 AM – 5:30 PM

W4: Enhanced Messaging

Organizers: Mark Dredze, Vitor R. Carvalho, and Tessa Lau (CC20, Second Floor) 9:00 AM – 3:30 PM

W6: Intelligent Techniques for Web Personalization and Recommender Systems

Organizers: Sarabjot Singh Anand, Bamshad Mobasher, Alfred Kobsa, and Dietmar Jannach (CC24C, Second Floor) 8:45 AM – 5:00 PM

W11: Spatial and Temporal Reasoning

Organizers: Hans W. Guesgen, Gérard Ligozat, and Rita V. Rodriguez (CC24A, Second Floor)
9:00 AM – 5:30 PM

W14: What Went Wrong and Why: Lessons from AI Research and Applications

Organizers: Mehmet H. Göker and Daniel G. Shapiro (CC24B, Second Floor) 9:00 AM – 5:30 PM

W15: Wikipedia and Artificial Intelligence: An Evolving Synergy

Organizers: Razvan Bunescu, Evgeniy Gabrilovich, and Rada Mihalcea (CC10D, First Floor)
9:00 AM – 6:00 PM

Monday

W1: Advancements in POMDP Solvers

Organizer: Guy Shani (CC10D, First Floor) 8:30 AM – 5:45 PM

W3: Coordination, Organization, Institutions and Norms in Agent Systems

Organizers: Virginia Dignum and Eric Matson (CC24B, Second Floor)
8:30 AM – 5:30 PM

W5: Human Implications of Human-Robot Interaction

Organizer: Ted Metzler (CC24C, Second Floor) 8:30 AM – 6:00 PM

W8: Mobile Robot Workshops: Robotics and Creativity (AM) and Mobility and Manipulation (PM)

Organizer: Youngmoo Kim (Drexel) and Monica Anderson (University of Alabama) (CC23, Second Floor) 8:20 AM – 12:30 PM, 1:50 PM – 6:00 PM

W12: Trading Agent Design and Analysis

Organizer: Wolfgang Ketter (CC20, Second Floor) 8:30 AM – 6:00 PM (tentative)

W13: Transfer Learning for Complex Tasks

Organizers: Matthew E. Taylor, Alan Fern, and Kurt Driessens (CC11A, First Floor) 9:00 AM – 5:30 PM

Postworkshop Technical Reports

A limited number of workshop technical reports will be available for sale after the conclusion of the workshop program at the registration desk. Technical reports are also available from www. aaai.org/Press/Reports/Workshops/

Student Programs

Student Only Reception

USC/Information Sciences Institute will host the second annual AAAI Student Only Reception, Tuesday, July 15 from 6:00–7:00 PM in CC10 on the first floor of the Hyatt Conference Center. Snacks and beverages will be served. All AAAI-08 registered students are welcome.

AAAI/SIGART Doctoral Consortium

The Thirteenth AAAI/SIGART Doctoral Consortium program will be held on Sunday and Monday, July 13–14, in CC10B on the first floor of the Hyatt Conference Center. The Doctoral Consortium provides an opportunity for a group of Ph.D. students to discuss and explore their research interests and career objectives in an interdisciplinary workshop together with a panel of established researchers. The 15 students accepted to participate in this program will also participate in the AAAI-08 Poster/Demo Session. All interested AAAI-08 student registrants are invited to observe the presentations and participate in discussions at the workshop. AAAI and SIGART gratefully acknowledge grants from the National Science Foundation, Toyota Motor Engineering & Manufacturing North America Inc., Microsoft Research, and Boeing, which provide partial funding for this event.

AAAI Fellow / Student Lunches

First held in 2006, this program provides an opportunity for a small number of students to chat with a AAAI Fellow over an informal lunch during the conference. **Preregistration prior to the conference was required.** Preregistered students should meet their designated Fellow in onsite registration in the Prairie Center (unless another site has been prearranged) on their assigned day.

AAAI-08 Student Blog/Forums

The AAAI-08 Blog is a student run blog that describes and documents AAAI-08 and IAAI-08 from a student's perspective. A small group of student bloggers attending the conferences will post daily items describing their observations, experiences, reactions, thoughts and questions. Pictures from the conference will be uploaded to the linked photo to blog. Other students attending AAAI are welcome to participate by adding their own observations via comments attached to posts and photographs. In addition, several student-run forums are available via the AAAI-08 Student Activities website at ai.eecs.umich.edu/aaai08/.

Morning	Afternoon	Evening
	Sunday, July 13	
Registration Tutorial Forum Workshops AAAI/SIGART DC	Registration Tutorial Forum Workshops AAAI/SIGART DC	
	Monday, July 14	
Registration Tutorial Forum Workshops AAAI/SIGART DC	Registration AAAI Business Meeting Tutorial Forum Workshops AAAI/SIGART DC	Opening Reception Video Competition
	Tuesday, July 15	
Registration AAAI-08 Presidential Address AAAI-08 and IAAI-08 Exhibits and Robots Poker Competition Game Playing Competition Trading Agent Competition AI Video Competition	Registration Invited Talks AAAI-08 and IAAI-08 Exhibits and Robots Poker Competition Game Playing Competition Trading Agent Competition AI Teaching Panel	Student Reception
	Wednesday, July 16	
Registration Invited Talks AAAI-08 and IAAI-08 Exhibits and Robots Poker Tournament Game Playing Competition Trading Agent Competition	Registration Invited Talks AAAI-08 and IAAI-08 Exhibits and Robots Poker Tournament Game Playing Competition Trading Agent Competition	Posters and Demos Reception
	Thursday, July 17	
Registration Invited Talks AAAI-08 and IAAI-08 Exhibits Human Versus General Game Playing Expo	AAAI-08	

Tutorial Forum

AAAI-08 technical registrants may attend up to four consecutive tutorials for an additional registration fee. All tutorials will be held on the first floor of the conference center.

Session I: Sunday, July 13

9:00 AM–1:00 PM

SA1: Computational Workflows for Large-Scale AI Research
Yolanda Gil
CC12D, Conference Center, First Floor

SA2: Decision-Theoretic Planning and Learning in Relational Domains
Prasad Tadepalli, Alan Fern, and Kristian Kersting
CC12C, Conference Center, First Floor

SA3: Graphical Models for Multi-Agent Decision Making
Avi Pfeffer and Ya'akov (Kobi) Gal
CC12B, Conference Center, First Floor

SA4: Machine Learning for Biomedical Applications
David Page
CC12A, Conference Center, First Floor

Session II: Sunday, July 13

2:00 PM–6:00 PM

SP1: Computational Mechanism Design with Applications to E-Commerce and Planning
David Parkes
CC12D, Conference Center, First Floor

SP2: Human-Robot Interaction
Holly A. Yanco
CC12C, Conference Center, First Floor

SP3: Satisfied by Message Passing: Probabilistic Techniques for Combinatorial Problems
Lukas Kroc, Ashish Sabharwal, and Bart Selman
CC12B, Conference Center, First Floor

SP4: Social Network Mining
Jennifer Neville and Foster Provost
CC12A, Conference Center, First Floor

Session III: Monday, July 14

9:00 AM–1:00 PM

MA1: Ambient Intelligence
Juan Carlos Augusto, Diane Cook, and Hans Guesgen
CC12D, Conference Center, First Floor

MA2: General Game Playing
Michael Thielscher
CC12C, Conference Center, First Floor

MA3: Path Planning
Michael Buro, Sven Koenig, and Nathan Sturvetant
CC12B, Conference Center, First Floor

MA4: Visual Recognition
Kristen Grauman and Bastian Leibe
CC12A, Conference Center, First Floor

Session IV: Monday, July 14

2:00 PM–6:00 PM

MP1: External Memory Graph Search
Stefan Edelkamp, Eric Hansen, Shahid Jabbar, and Rong Zhou
CC12D, Conference Center, First Floor

MP2: Introduction to Sketch Recognition
Tracy Hammond
CC12C, Conference Center, First Floor

MP3: The Many Faces of Logistic Regression
David Lewis
CC12B, Conference Center, First Floor

Special Meetings

AAAI Business Meeting

The AAAI Annual Business Meeting will be held Monday, July 14, 12:45–1:15 PM, CC24A, Second Level, Hyatt Conference Center.

AAAI Conference Committee Meeting

AAAI Conference Committee Meeting will be held Thursday, July 17, 7:45 – 8:45 AM, Meeting Suite 4, Third Floor, Hyatt Hotel.

AAAI Executive Council Meeting

The AAAI Executive Council Meeting will be held Monday, July 14, 9:00 AM – 4:00 PM, Meeting Suite 4, Third Floor, Hyatt Hotel. Continental breakfast will be available at 8:30 AM.

AAAI Press Editorial Board Meeting

The AAAI Press Editorial Board Meeting will be held Tuesday, July 15, 12:30 – 1:50 PM, Meeting Suite 4, Third Floor, Hyatt Hotel.

AAAI Publications Committee Meeting

The AAAI Publications Committee Meeting will be held Monday, July 14, 7:30 – 9:00 PM, Meeting Suite 4, Third Floor, Hyatt Hotel.

AAAI Strategic Planning Board Meeting

The AAAI Strategic Planning Board Meeting will be held Sunday, July 13, 3:00 – 5:00 PM, Meeting Suite 4, Third Floor, Hyatt Hotel.

***AI Magazine* Editorial Board Meeting**

The AI Magazine Editorial Board Meeting will be held Wednesday, July 16, 12:30 – 1:50 PM, Meeting Suite 4, Third Floor, Hyatt Hotel.

Invited Talks

Tuesday, July 15

9:00–10:00 AM

AAAI Presidential Address

Eric Horvitz (Microsoft Corporation)
Regency Ballroom
See description on page 3.

10:20–11:20 AM

IAAI-08 Invited Talk

Boss, the Urban Challenge, and the Promise of Autonomous Driving

Chris Urmson (Carnegie Mellon University)
CC24, Conference Center, Second Floor

The DARPA Urban Grand Challenge was a 60-mile race through an urban roadway where vehicles had to follow the same rules of the road that human drivers are expected to respect. This challenge differed from the two previous Grand Challenges in that the robots not only had to navigate the course, but they were required to drive safely in the presence of other human-driven cars as well as the other robot competitors. Urmson will describe the details of the DARPA Urban Challenge and describe Carnegie Mellon's entry Boss, the autonomous vehicle that won the challenge. He will describe the overall system architecture and highlight the many component technologies that made up Boss.

1:50–2:50 PM

AAAI-08 Invited Talk

Making Sense of Complex Networks

Mark Newman (University of Michigan)
Regency Ballroom

There are networks in almost every part of our lives. Some of them are familiar and obvious: the Internet, the power grid, the road network. Others are less obvious but just as important. The patterns of friendships or acquaintances between people form a social network. Boards of directors join together in networks of corporations. Communities of scientists and other academics join together in networks of collaboration. Recent years have seen an explosion of interest in networks among mathematicians, sociologists, computer scientists, physicists, biologists, and others. Newman's talk will describe some of the successes and challenges of the study of networks and discuss a promising new line of research in the application of methods from machine learning to the analysis and understanding of networked systems.

Wednesday, July 16

9:00–10:00 AM

AAAI-08 Invited Talk

100 Million Years of Evolutionary History of the Human Genome

David Haussler (University of California, Santa Cruz)
Regency Ballroom

Comparing the genomes of present-day species allows us to computationally reconstruct what most of the DNA bases in the genome of the common ancestor of placental mammals must have looked like, approximately 100 million years ago. We can then deduce most of the changes that lead to humans. In so doing, we discover how Darwinian evolution has shaped

us at the molecular level. About five percent of the human genome consists of "ultraconserved" elements that have remained essentially unchanged across millions of years of evolution, suggesting important function. Among these ultraconserved segments, we occasionally see short segments that have undergone unusually rapid change in one species, such as a gene linked to brain development that has changed dramatically between chimpanzees and humans. It will be many years before the biology of such examples is fully understood, but right now we relish the opportunity to get a first peek at the molecular tinkering that transformed our animal ancestors into humans.

10:20–11:20 AM

IAAI-08 Invited Talk / Robert S. Engelmore Memorial Lecture

Toward Cognitive Prostheses

Kenneth M. Ford (Florida Institute for Human and Machine Cognition [IHMC])
Regency Ballroom A/B

See description on page 8.

1:50–2:50 PM

AAAI-08 Invited Talk

What Is To Be Done?

Stuart Russell (University of California, Berkeley)
Regency Ballroom

Much has been achieved in the field of AI, yet much remains to be done if we are to reach the goals imagined by the early pioneers. Russell will examine some of what we have recently understood, as a means of identifying what might be understood next.

Thursday, July 17

9:00–10:00 AM

AAAI-08 Invited Talks

From Images to Scenes: Using Lots of Data to Infer Geometric, Photometric and Semantic Scene Properties from a Single Image

Alexei A. Efros (Carnegie Mellon University)
Regency Ballroom A

Reasoning about a scene from a photograph is an inherently ambiguous task. This is because a single image in itself does not carry enough information to disambiguate the world that it's depicting. Of course, humans have no problems understanding photographs because of all the prior visual experience they can bring to bear on the task. How can we help computers do the same? Efros proposes to "brute force" the problem by using massive amounts of visual data, both labeled and unlabeled, as a way of capturing the statistics of the natural world. In this talk, Efros will present some recent results on inferring geometric, photometric, and semantic scene properties from a single image. He will first briefly describe the system for estimating the rough geometric surface layout of a scene as well as the camera viewpoint. He will show how this information, in turn, can be useful for modeling objects in the scene. Next, he will describe a very simple way of using the surface layout information as a way of estimating a rough illumination map for the scene. Finally, he will describe a new system that uses millions of unlabeled photographs from Flickr to capture some implicit semantic scene structure of an image.

IAAI-08 Invited Talk

Robert S. Engelmore Memorial Award Lecture: Toward Cognitive Prostheses

Kenneth M. Ford (Florida Institute for Human and Machine Cognition [IHMC])

Wednesday, 10:20–11:20 am
Regency Ballroom A/B

The emerging concept of human-centered (HCC) computing represents a significant shift in thinking about intelligent machines and, indeed, about information technology in general. Human-centered computing embodies a "systems view," in which human thought and action and technological systems are seen as inextricably linked and equally important aspects of analysis, design, and evaluation. From an AI perspective, the HCC framework is focused less on standalone exemplars of mechanical cognitive talent, and is concerned more with computational systems designed to amplify human cognitive and perceptual abilities. This approach results in systems that can be regarded as cognitive or perceptual prostheses, much as eyeglasses are a sort of ocular prosthesis. These systems fit the human and machine components together in ways that exploit their respective strengths and mitigate their respective weaknesses. Building cognitive prostheses is fundamentally different from AI's traditional Turing Test ambition — it doesn't set out to imitate human abilities, but to extend them. This shift in perspective places human/machine interaction issues at the center of the subject. The "system" in question isn't "the computer," but instead includes cognitive and social systems, computational tools, and the physical facilities and environment. Thus, human-centered computing provides a new research outlook for AI applications, with new research agendas and goals.

9:00–10:00 AM

AAAI-08 Invited Talks

Sense and Sensibility: Sentiment Analysis, Opinion Mining, and the Computational Treatment of Subjective Language

Lillian Lee (Cornell University)
Regency Ballroom C

"What do other people think?" has always been an important consideration to most of us when making decisions. Long before the world wide web, we asked our friends who they were planning to vote for and consulted Consumer Reports to decide which dishwasher to buy. But the Internet has (among other things) made it possible to learn about the opinions and experiences of those in the vast pool of people that are neither our personal acquaintances nor well-known professional critics — that is, people we have never heard of. Enter sentiment analysis, a flourishing research area devoted to the computational treatment of subjective and opinion-oriented language. Sample phenomena to contend with range from sarcasm in blog postings to the interpretation of political speeches. Lee's talk will cover some of the motivations, challenges, and approaches in this broad and exciting field.

10:20–11:20 AM

IAAI-08 Invited Talk

Realizing Claytronics: A Challenge for AI

Seth Copen Goldstein (Carnegie Mellon University)
CC24, Conference Center, Second Floor

In this talk, Seth Goldstein will describe the hardware and software challenges involved in realizing Claytronics, a form of programmable matter. The goal of the claytronics project is to create ensembles of cooperating submillimeter robots, which work together to form dynamic 3D physical objects. For example, claytronics might be used in telepresense to mimic, with high-fidelity and in 3-dimensional solid form, the look, feel, and motion of the person at the other end of the "telephone" call. To achieve this long-range vision we are investigating hardware mechanisms for constructing sub-millimeter robots, which can be manufactured en masse using photolithography. In parallel with our hardware effort, we are developing novel distributed programming languages and algorithms to control the ensembles.

AI Teaching Forum

New for 2008, the AAAI Teaching Forum provides a means for researchers and educators to share ideas, strategies, and resources related to education in AI. The forum has four components, which are integrated into the AAAI 2008 conference events: a colloquium focused on AI-themed educational resources (presented in conjunction with the AAAI-08 Workshop Program), a track in the video program, a panel during the main technical program (Tuesday, July 15, 4:20 PM), and invited posters presented in the Teaching Forum display area of the AAAI-08 Poster/Demo Reception on Wednesday evening, July 16. Please refer to the appropriate listings in this program for further schedule information.

Save the Date! — July 11–15, 2010

AAAI will go to Atlanta, Georgia in 2010! The Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10) and the Twenty-Second Conference on Innovative Applications of Artificial Intelligence (IAAI-10) will be held in Atlanta at the Westin Peachtree Plaza Hotel, July 11–15, 2010. Please mark your calendars, and visit www.aaai.org/aaai10 .php for updates later this year!

Intelligent Systems Demonstrations

This year's demonstrations cover a broad range of domains. System builders will be on hand to present their work. All that is needed to make this evening a big success is your active exploration of these interactive systems! Intelligent Systems Demonstrations will be held in the Regency Ballroom on Wednesday, July 16, 6:00 – 9:30 PM

Table #1

ARMOR Security for Los Angeles International Airport

James Pita, Manish Jain, Fernando Ordóñez, Christopher Portway, Milind Tambe, and Craig Western (University of Southern California); Praveen Paruchuri (Intelligent Automation, Inc.); and Sarit Kraus (Bar-Ilan University and University of Maryland, College Park)

ARMOR (assistant for randomized monitoring over routes) is a software system designed to aid security personnel in creating randomized schedules for patrolling a specific set of routes or checkpoints. This demonstration will showcase how the mixed-initiative interface allows security to interact with the system to create a randomized schedule with guaranteed quality constraints.

Table #2

A Demonstration of the RADAR Personal Assistant

Andrew Faulring, Brad Myers, and Ken Mohnkern (Carnegie Mellon University); Michael Freed (SRI International)

RADAR, a software agent that aims to act like a trusted human assistant, helps people handle tasks contained within e-mail messages. RADAR components assist the user with both task management and task execution to reduce a person's experience of email overload. RADAR components employ machine learning to improve their performance, and human participant studies have shown a clear impact of such learning on user performance metrics.

Table #3

A Hybrid Approach to Domino Portrait Generation

Hadrien Cambazard, John Horan, Eoin O'Mahony, and Barry O'Sullivan (Cork Constraint Computation Centre, Department of Computer Science, University College Cork, Ireland)

A domino portrait is an approximation of an image using a given number of sets of dominoes. They have been generated most often using integer linear programming techniques that provide optimal solutions, but are often slow and do not scale well. We demonstrate a new approach that overcomes these limitations and provides high quality portraits. Our software combines techniques from operations research, artificial intelligence, and computer vision. Starting from a randomly generated template of blank domino shapes, a subsequent optimal placement of dominoes can be achieved in constant time when the problem is viewed as a minimum cost flow. The domino portraits one obtains are good, but not as visually attractive as optimal ones. Combining techniques from computer vision and local search we can improve our portraits to be visually indistinguishable from those generated optimally.

Table #4

CogSketch

Ken Forbus, Andrew Lovett, Kate Lockwood, Jon Wetzel, and Jeff Usher (Qualitative Reasoning Group, Northwestern University)

CogSketch is an open-domain sketch understanding system. CogSketch uses a combination of visual, logical, and analogical reasoning to understand what is sketched, using an OpenCyc-derived knowledge base. This demonstration will show how CogSketch is used in cognitive modeling and work in progress on sketch-based educational software.

Table #5

Human-Robot Collaboration for Remote Surveillance

Evan A. Sultanik, Ilya Braude, Peter Thai, Robert N. Lass, Duc N. Nguyen, Joseph B. Kopena, and William C. Regli (Drexel University Department of Computer Science); Sean A. Lisse, Steven Furtwangler and Alan J. Vayda (Soar Technology)

In current practice, robotic surveillance is accomplished through human teleoperation, with little or no autonomous capability. The goal of our work is to give more autonomy to agents such that a single human can successfully task multiple robots without cognitive overload. We present an application of multiagent systems and wireless networking to remote robot-based surveillance.

Table #6

IMT: A Mixed-Initiative Data Mapping and Search Toolkit

Mike Zang (CDM Technologies Inc), Adam Gray (California Polytechnic State University, San Luis Obispo), Kalyan Moy Gupta (Knexus Research Corporation), David W. Aha (Naval Research Laboratory), and Joe Kriege (CDM Technologies Inc)

This demonstration illustrates the ability of Intelligent Mapping Toolkit (IMT) to specify, import, and refine meta- and instance-data mapping problems. A combination of multiple methodologies implementing the match operation is shown. Additionally, our demonstration incorporates one or more user-intuitive IMT-technology-derived search applications intended to support hands on interactivity by attendees.

Table #7

Knowledge-Based Spatial Reasoning for Scene Generation from Text Descriptions

Dan Tappan (Idaho State University)

This demo showcases a knowledge-based, test-and-evaluation system for generating plausible, interactive, 3D visualizations from basic English descriptions of a zoo environment. It primarily addresses linguistic issues of underspecification, vagueness, uncertainty, and context with respect to intrinsic, extrinsic, and deictic frames of spatial reference.

Table #8

Make3D: Depth Perception from a Single Still Image

Ashutosh Saxena and Andrew Y. Ng (Stanford University)

We present Make3D algorithm for learning depths from a single still image. In our live demo, users will be able to download an image from their own camera or from internet to our algorithm, which will then convert it into a 3-d model. The user will then be able to use a mouse to control how they "fly" through the model, and see it from different viewpoints.

Table #9

Prometheus Design Tool

John Thangarajah, Michael Winikoff, Lin Padgham (RMIT University, Melbourne, Australia)

The Prometheus Design Tool supports the design of multi-agent systems following the Prometheus design methodology. It includes many features, such as entity propagation, consistency checking (both on-line and on-demand), hierarchical views for a layered design, customizable report generation including the ability to save any diagram individually, AUML protocol specification via a textual notation, code generation into the JACK agent language.

Table #10

The Benefits of an Ontological Patient Model in Clinical Decision Support

Mark Austin, Matthew Kelly, and Sir Michael Winikoff (Oxford University)

We demonstrate an application integrating an ontological data model with an argumentation-based decision-support system, showing how the combination of leading technologies OWL (Web Ontology Language), SPARQL (the W3C recommended query language for ontologies) and Jena (a popular java API for ontologies) can be used to achieve this. The software trial is being conducted in a live clinical setting.

Table #11

Yoopick: A Combinatorial Sports Prediction Market

Sharad Goel, David Pennock, Daniel Reeves, and Cong Yu (Yahoo!)

Yoopick is a combinatorial sports prediction market that implements a flexible betting language, and in turn facilitates fine-grained probabilistic estimation of outcomes. A typical bet in this language is of the form, "Purdue will beat Michigan by between 3 and 11 points," and the bets together generate estimates for the exact final point difference in a game.

	REGENCY BALLROOM	CC12A	CC12B	CC12C
8:30–10:00 AM	8:30 - 9:00 AM **Opening Ceremony** Welcome and Opening Remarks Outstanding Award Presentations — Papers, SPC Member, PC Member *Dieter Fox and Carla Gomes, AAAI-08 Program Cochairs*	IAAI Welcome, Robert S. Engelmore Award, Deployed Application Award Announcements *Mehmet Goker, IAAI-08 Conference Chair; Karen Haigh, IAAI-08 Program Cochair,;and David Leake, AI Magazine Editor-in-Chief* IJCAI-JAIR Best Paper Prize *Toby Walsh, Editor-in-Chief,* JAIR	AAAI Classic Paper and Distinguished Service Awards *Alan Mackworth, AAAI Past President and Awards Committee Chair; Eric Horvitz, AAAI President*	9:00 – 10:00 AM Regency Ballroom, Hyatt Regency AAAI Presidential Address *Eric Horvitz (Microsoft Corporation)*
10:20–11:20 AM	**Nectar: Human Computer Interaction** Intelligent Email: Aiding Users with AI *Mark Dredze, Hanna M. Wallach, Danny Puller, Tova Brooks, Josh Carroll, Joshua Magarick, John Blitzer, Fernando Pereira* Examining Difficulties Software Developers Encounter in the Adoption of Statistical Machine Learning *Kayur Patel, James Fogarty, James A. Landay, Beverly Harrison* Decision-Theoretic User Interface Generation *Krzysztof Gajos, Daniel Weld, Jacob Wobbrock*	**Global Constraints** Efficient Context-Free Grammar Constraints *Serdar Kadioglu, Meinolf Sellmann* Bound Consistency for Binary Length-Lex Set Constraints *Pascal Van Hentenryck, Justin Yip, Carmen Gervet, Grégoire Dooms* The Parameterized Complexity of Global Constraints *C. Bessiere, E. Hebrard, B. Hnich, Z. Kiziltan, C.-G. Quimper, T. Walsh*	**Nectar/Senior: Agents and Game Theory** *Nectar:* Efficient Algorithms to Solve Bayesian Stackelberg Games for Security Applications *Praveen Paruchuri, Jonathan P. Pearce, Janusz Marecki, Milind Tambe, Fernando Ordonez, Sarit Kraus* *Nectar:* Adaptive Management of Air Traffic Flow: A Multiagent Coordination Approach *Kagan Tumer, Adrian Agogino* *Senior:* Game Theory Pragmatics: A Challenge for AI *Yoav Shoham*	**Natural-Language Processing 1** Text Categorization with Knowledge Transfer from Heterogeneous Data Sources *Rakesh Gupta, Lev Ratinov* Importance of Semantic Representation: Dataless Classification *Ming-Wei Chang, Lev Ratinov, Dan Roth, Vivek Srikumar* Single Document Keyphrase Extraction Using Neighborhood Knowledge *Xiaojun Wan, Jianguo Xiao*
11:30 AM–12:30 PM	**AI and the Web: Social Networking and Collaboration** Linking Social Networks on the Web with FOAF: A Semantic Web Case Study *Jennifer Golbeck, Matthew Rothstein* Generating Useful Network-based Features for Analyzing Social Networks *Jun Karamon, Yutaka Matsuo, Mitsuru Ishizuka* Minimizing the Spread of Contamination by Blocking Links in a Network *Masahiro Kimura, Kazumi Saito, Hiroshi Motoda*	**Search 1** Minimizing Disk I/O in Two-Bit Breadth-First Search *Richard E. Korf* Predicting the Performance of IDA* with Conditional Distributions *Uzi Zahavi, Ariel Felner, Neil Burch, Robert C. Holte* R* Search *Maxim Likhachev, Anthony Stentz*	**Auctions and Market-Based Systems 1** An Expressive Auction Design for Online Display Advertising *Sébastien Lahaie, David C. Parkes, David M. Pennock* A Theory of Expressiveness in Mechanisms *Michael Benisch, Norman Sadeh, Tuomas Sandholm* Partially Synchronized DEC-MDPs in Dynamic Mechanism Design *Sven Seuken, Ruggiero Cavallo, David C. Parkes*	**Nonmonotonic Reasoning** Nonmonotonic Modes of Inference *Victor Jauregui* From Qualitative to Quantitative Proofs of Security Properties Using First-Order Conditional Logic *Joseph Y. Halpern* Non-monotonic Temporal Logics that Facilitate Elaboration Tolerant Revision of Goals *Chitta Baral, Jicheng Zhao*
1:50-2:50 PM	**AAAI Invited Talk** Making Sense of Complex Networks *Mark Newman (University of Michigan)*			
3:00–4:00 PM	**AI and the Web: Information Extraction** Extracting Relevant Snippets for Web Navigation *Qing Li, K. Selçuk Candan, Qi Yan* Automatic Extraction of Data Points and Text Blocks from 2-Dimensional Plots in Digital Documents *Saurabh Kataria, William Browuer, Prasenjit Mitra, C. Lee Giles* Turning Web Text and Search Queries into Factual Knowledge: Hierarchical Class Attribute Extraction *Marius Pasca*	**Satisfiability 1** On the Power of Top-Down Branching Heuristics *Matti Järvisalo, Tommi Junttila* Backdoor Trees *Marko Samer, Stefan Szeider* Measuring the Hardness of SAT Instances *Carlos Ansótegui, María Luisa Bonet, Jordi Levy, Felip Manyà*	**Auctions and Market-Based Systems 2** Efficient Metadeliberation Auctions *Ruggiero Cavallo, David C. Parkes* Expressive Banner Ad Auctions and Model-Based Online Optimization for Clearing *Craig Boutilier, David C. Parkes, Tuomas Sandholm, William E. Walsh* Bidding Strategies for Realistic Multi-Unit Sealed-Bid Auctions *Ioannis A. Vetsikas, Nicholas R. Jennings*	**Senior Papers 1** Learning to Connect Language and Perception *Raymond J. Mooney* An Interaction-Based Approach to Computational Epidemiology *Christopher L. Barrett, Stephen Eubank, Madhav V. Marathe*
4:20–5:20 PM	**Security and Privacy** Proactive Intrusion Detection *Benjamin Liebald, Dan Roth, Neelay Shah, Vivek Srikumar* Learning to Analyze Binary Computer Code *Nathan Rosenblum, Xiaojin Zhu, Barton Miller, Karen Hunt*	**Applications** A Global Constraint for Bin-Packing with Precedences: Application to the Assembly Line Balancing Problem *Pierre Schaus, Yves Deville* Online Learning with Expert Advice and Finite-Horizon Constraints *Branislav Kveton, Jia Yuan Yu, Georgios Theocharous, Shie Mannor* Protein Structure Prediction on the Face Centered Cubic Lattice by Local Search *Manuel Cebrián, Ivan Dotú, Pascal Van Hentenryck, Peter Clote*	**Coordination and Collaboration** Coalition Structure Generation: Dynamic Programming Meets Anytime Optimization *Talal Rahwan, Nicholas R. Jennings* Agent Coordination with Regret Clearing *Sven Koenig, Xiaoming Zheng, Craig Tovey, Richard Borie* Agent Organized Networks Redux *Robin Glinton, Katia Sycara, Paul Scerri*	**AI Teaching Forum** Panel Presentation
EVENING	**Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.**			

	CC12D	CC11A	CC11B	CC24
8:30–10:00 AM				
10:20–11:20 AM	**Planning and Scheduling** Planning with Problems Requiring Temporal Coordination *Andrew Coles, Maria Fox, Derek Long, Amanda Smith* Probabilistic Planning via Determinization in Hindsight *Sungwook Yoon, Alan Fern, Robert Givan, Subbarao Kambhampati* Optimal Scheduling of Contract Algorithms with Soft Deadlines *Spyros Angelopoulos, Alejandro López-Ortiz, Angèle M. Hamel*	**Semisupervised Learning** Semi-supervised Classification Using Local and Global Regularization *Fei Wang, Tao Li, Gang Wang, Changshui Zhang* Instance-level Semisupervised Multiple Instance Learning *Yangqing Jia, Changshui Zhang* On Discriminative Semi-Supervised Classification *Fei Wang, Changshui Zhang*	**Integrated Intelligence: Adaptive Systems for Complex Task Management** Achieving Far Transfer in an Integrated Cognitive Architecture *Dan Shapiro, Tolga Könik, Paul O'Rorke* POIROT – Integrated Learning of Web Service Procedures *Mark. Burstein et al.* RADAR: A Personal Assistant that Learns to Reduce Email Overload *Michael Freed, Jaime Carbonell, Geoff Gordon, Jordan Hayes, Brad Myers, Daniel Siewiorek, Stephen Smith, Aaron Steinfeld, Anthony Tomasic*	**IAAI Invited Talk** Boss, the Urban Challenge, and the Promise of Autonomous Driving *Chris Urmson (Carnegie Mellon University)*
11:30 AM–12:30 PM	**Approximate Probabilistic Inference 1** Latent Tree Models and Approximate Inference in Bayesian Networks *Yi Wang, Nevin L. Zhang, Tao Chen* Lifted First-Order Belief Propagation *Parag Singla, Pedro Domingos* Hybrid Markov Logic Networks *Jue Wang, Pedro Domingos*	**Dimensionality Reduction** Sparse Projections over Graph *Deng Cai, Xiaofei He, Jiawei Han* Distance Metric Learning VS. Fisher Discriminant Analysis *Babak Alipanahi, Michael Biggs, Ali Ghodsi* AnalogySpace: Reducing the Dimensionality of Common Sense Knowledge *Robert Speer, Catherine Havasi, Henry Lieberman*	**Integrated Intelligence: Combining Reasoning, Planning, and Execution** The PELA Architecture: Integrating Planning and Learning to Improve Execution *Sergio Jiménez, Fernando Fernández, Daniel Borrajo* Pervasive Diagnosis: The Integration of Diagnostic Goals into Production Plans *Lukas Kuhn, Bob Price, Johan de Kleer, Minh Do, Rong Zhou* Bimodal Spatial Reasoning with Continuous Motion *Samuel Wintermute, John E. Laird*	**IAAI Emerging** Enabling the Interoperability of Large-Scale Legacy Systems *Kalyan Moy Gupta, Mike Zang, Adam Gray, David W. Aha, Joe Kriege* Finding Ontological Correspondences for a Domain-Independent Natural Language Dialog Agent *Hamid Haidarian Shahri, Donald Perlis*
1:50-2:50 PM				**IAAI Emerging** Semantic Web Development for Traditional Chinese Medicine *Zhaohui Wu, Tong Yu, Huajun Chen, Xiaohong Jiang, Chunying Zhou, Yu Zhang, Yuxin Mao, Yi Feng, Meng Cui, Aining Yin* **IAAI Deployed** A Case Study of AI Application on Language Instruction: CSIEC *Jiyou Jia*
3:00–4:00 PM	**Search in Planning** Accuracy of Admissible Heuristic Functions in Selected Planning Domains *Malte Helmert, Robert Mattmüller* Fast Planning by Search in Domain Transition Graph *Yixin Chen, Ruoyun Huang, Weixiong Zhang* Landmarks Revisited *Silvia Richter, Malte Helmert, Matthias Westphal*	**Semi and Unsupervised Learning** Clustering via Random Walk Hitting Time on Directed Graphs *Mo Chen, Jianzhuang Liu, Xiaoou Tang* Integrating Multiple Learning Components through Markov Logic *Thomas G. Dietterich, Xinlong Bao* Multi-View Local Learning *Dan Zhang, Fei Wang, Changshui Zhang, Tao Li*	**Integrated Intelligence: Adaptive and Interactive Robotic Systems** Adaptive Control for Autonomous Underwater Vehicles *Conor McGann, Frederic Py, Kanna Rajan, John Ryan, Richard Henthorn* Spatial Scaffolding for Sociable Robot Learning *Cynthia Breazeal, Matt Berlin* Incorporating Mental Simulation for a More Effective Robotic Teammate *William G. Kennedy, Magdalena D. Bugajska, William Adams, Alan C. Schultz, J. Gregory Trafton*	**IAAI Deployed** Tactical Language and Culture Training Systems: Using Artificial Intelligence to Teach Foreign Languages and Cultures *W. Lewis Johnson, Andre Valente* **IAAI Emerging** Personalisation of Telecommunications Services as Combinatorial Optimisation *David Lesaint, Deepak Mehta, Barry O'Sullivan, Luis Quesada, Nic Wilson*
4:20–5:20 PM	**Approximate Probabilistic Inference 2** A General Method for Reducing the Complexity of Relational Inference and its Application to MCMC *Hoifung Poon, Pedro Domingos, Marc Sumner* Focusing Generalizations of Belief Propagation on Targeted Queries *Arthur Choi, Adnan Darwiche* Many-Pairs Mutual Information for Adding Structure to Belief Propagation Approximations *Arthur Choi, Adnan Darwiche*	**Nectar: Planning** Explicit-State Abstraction: A New Method for Generating Heuristic Functions *Malte Helmert, Patrik Haslum, Jörg Hoffmann* On-line Planning and Scheduling: An Application to Controlling Modular Printers *Minh B. Do, Wheeler Ruml, Rong Zhou* Beyond Classical Planning: Procedural Control Knowledge and Preferences in State-of-the-Art Planners *Jorge A. Baier, Christian Fritz, Meghyn Bienvenu, Sheila A. McIlraith*	**Integrated Intelligence: Compound Reasoning for Complex Decision Making** An Integrated Reasoning Approach to Moral Decision-Making *Morteza Dehghani, Emmett Tomai, Ken Forbus, Matthew Klenk* An Integrated Agent for Playing Real-Time Strategy Games *Josh McCoy, Michael Mateas*	**IAAI Deployed** Using AI for Olympic Equestrian Event Preparation *Andy Hon Wai Chun* **IAAI Emerging** Crops Selection for Optimal Soil Planning using Multiobjective Evolutionary Algorithms *Christian Von Lücken, Ricardo Brunelli*

Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.

	REGENCY / CC10D	CC12A	CC12B	CC12C
9:00–10:00 AM	**AAAI Invited Talk (Regency Ballroom)** 100 Million Years of Evolutionary History of the Human Genome *David Haussler (University of California, Santa Cruz)*			
10:20–11:20 AM	**AI and the Web: Enhancing Web Search 1 (Regency Ballroom)** Metalevel Information in Ontology-Based Applications *Thanh Tran, Peter Haase, Boris Motik, Bernardo Cuenca Grau, Ian Horrocks* A User-Oriented Webpage Ranking Algorithm Based on User Attention Time *Songhua Xu, Yi Zhu, Hao Jiang, Francis C.M. Lau* Concept-Based Feature Generation and Selection for Information Retrieval *Ofer Egozi, Evgeniy Gabrilovich, Shaul Markovitch*	**Search 2** Learning from Multiple Heuristics *Mehdi Samadi, Ariel Felner, Jonathan Schaeffer* Efficient Memoization for Dynamic Programming with Ad-Hoc Constraints *Joxan Jaffar, Andrew E. Santosa, Razvan Voicu* A New Incomplete Method for CSP Inconsistency Checking *Belaïd Benhamou, Mohamed Réda Saïdi*	**Game Theory** Strategyproof Classification under Constant Hypotheses: A Tale of Two Functions *Reshef Meir, Ariel D. Procaccia, Jeffrey S. Rosenschein* Manipulating the Quota in Weighted Voting Games *Michael Zuckerman, Piotr Faliszewski, Yoram Bachrach, Edith Elkind* First-Order Algorithm with $O(\ln(1/\varepsilon))$ Convergence for ε-Equilibrium in Two-Person Zero-Sum Games *Andrew Gilpin, Javier Peña, Tuomas Sandholm*	**Natural-Language Processing 2** Using Answer Set Programming and Lambda Calculus to Characterize Natural Language Sentences with Normatives and Exceptions *Chitta Baral, Juraj Dzifcak, Tran Cao Son* Using Wiktionary for Computing Semantic Relatedness *Torsten Zesch, Christof Müller, Iryna Gurevych* Automatic Semantic Relation Extraction with Multiple Boundary Generation *Brandon Beamer, Alla Rozovskaya, Roxana Girju*
11:30 AM–12:30 PM	**AI and the Web: Enhancing Web Search 2 (Regency Ballroom)** Intelligent Output Interface for Intelligent Medical Search Engine *Gang Luo* Question Utility: A Novel Static Ranking of Question Search *Young-In Song, Chin-Yew Lin, Yunbo Cao, Hae-Chang Rim* Query-URL Bipartite Based Approach to Personalized Query Recommendation *Lin Li, Zhenglu Yang, Ling Liu, Masaru Kitsuregawa*	**Satisfiability 2** Exploiting Causal Independence Using Weighted Model Counting *Wei Li, Pascal Poupart, Peter van Beek* Studies in Solution Sampling *Vibhav Gogate, Rina Dechter* Within-problem Learning for Efficient Lower Bound Computation in Max-SAT Solving *Han Lin, Kaile Su, Chu-Min Li*	**Multiagent Systems 1** Determining Possible and Necessary Winners under Common Voting Rules Given Partial Orders *Lirong Xia, Vincent Conitzer* Multiagent Graph Coloring: Pareto Efficiency, Fairness and Individual Rationality *Yaad Blum, Jeffrey S. Rosenschein* Voting on Multiattribute Domains with Cyclic Preferential Dependencies *Lirong Xia, Vincent Conitzer, Jérôme Lang*	**Answer Set Programming 1** A Reductive Semantics for Counting and Choice in Answer Set Programming *Joohyung Lee, Vladimir Lifschitz, Ravi Palla* Credulous Resolution for Answer Set Programming *Piero A. Bonatti, Enrico Pontelli, Tran Cao Son* Efficient Haplotype Inference with Answer Set Programming *Esra Erdem, Ferhan Türe*
1:50-2:50 PM	**AAAI Invited Talk (Regency Ballroom)** What Is To Be Done? *Stuart Russell (University of California, Berkeley)*			
3:00–4:00 PM	**AI and the Web: Machine Learning and the Web (CC10D)** A Utility-Theoretic Approach to Privacy and Personalization *Andreas Krause, Eric Horvitz* Semi-Supervised Learning for Blog Classification *Daisuke Ikeda, Hiroya Takamura, Manabu Okumura* An Unsupervised Approach for Product Record Normalization across Different Web Sites *Tak-Lam Wong, Tik-Shun Wong, Wai Lam*	**AAAI-08 Outstanding Papers** Optimal False-Name-Proof Voting Rules with Costly Voting *Liad Wagman, Vincent Conitzer* How Good is Almost Perfect? *Malte Helmert, Gabriele Röger* **Honorable Mention** On the Progression of Situation Calculus Basic Action Theories: Resolving a 10-year-old Conjecture *Stavros Vassos, Hector J. Levesque*	**Communication and Coordination** Mathematical Modeling and Convergence Analysis of Trail Formation *Sameena Shah, Ravi Kothari, Jayadeva, Suresh Chandra* Memetic Networks: Analyzing the Effects of Network Properties in Multi-Agent Performance *Ricardo M. Araujo, Luis C. Lamb* Semantical Considerations on Dialectical and Practical Commitments *Munindar P. Singh*	**Reasoning with Beliefs** Factored Models for Probabilistic Modal Logic *Afsaneh Shirazi, Eyal Amir* An AGM-Based Belief Revision Mechanism for Probabilistic Spatio-Temporal Logics *Austin Parker, Guillaume Infantes, V.S. Subrahmanian, John Grant* Parallel Belief Revision *James Delgrande, Yi Jin*
4:20–5:20 PM	**AI and the Web: Recommendation and Collaboration (CC10D)** Efficient Querying Relaxed Dominant Relationship between Product Items Based on Rank Aggregation *Zhenglu Yang, Lin Li, Masaru Kitsuregawa* On the Enactability of Business Protocols *Nirmit Desai, Munindar P. Singh*	**Constraints Reasoning** Virtual Arc Consistency for Weighted CSP *M. Cooper, S. de Givry, M. Sanchez, T. Schiex, M. Zytnicki* Reasoning with Cardinal Directions: An Efficient Algorithm *Xiaotong Zhang, Weiming Liu, Sanjiang Li, Mingsheng Ying*	**Multiagent Systems 2** Coordination and Multi-Tasking Using EMT *Zinovi Rabinovich, Nir Pochter, Jeffrey S. Rosenschein* Physical Search Problems Applying Economic Search Models *Yonatan Aumann, Noam Hazon, Sarit Kraus, David Sarne* The Impact of Vertical Specialization on Hierarchical Multi-Agent Systems *Steven Okamoto, Paul Scerri, Katia Sycara*	**Common-Sense Reasoning** A Semantic Approach for Iterated Revision in Possibilistic Logic *Guilin Qi* A First-Order Theory of Stanislavskian Scene Analysis *Leora Morgenstern* Horn Complements: Towards Horn-to-Horn Belief Revision *Marina Langlois, Robert H. Sloan, Balázs Szörényi, György Turán*
EVENING	**Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.** **Poster Demo Reception, 6:00–9:30 PM**			

	CC12D	CC11A	CC11B	CC24 / IAAI
9:00–10:00 AM				**IAAI Emerging** Reinforcement Learning for Vulnerability Assessment in Peer-to-Peer Networks *Scott Dejmal, Alan Fern, Thinh Nguyen* In-the-Dark Network Traffic Classification Using Support Vector Machines *William Turkett, Jr., Andrew Karode, Errin Fulp*
10:20–11:20 AM	**Search and Heuristics** Hypothesis Pruning and Ranking for Large Plan Recognition Problems *Gita Sukthankar, Katia Sycara* PBA*: Using Proactive Search to Make A* Robust to Unplanned Deviations *Paul Breimyer, Peter R. Wurman* Error Classification in Action Descriptions: A Heuristic Approach *Thomas Eiter, Michael Fink, Ján Senko*	**Data Mining and Discriminative Training** Clustering on Complex Graphs *Bo Long, Mark (Zhongfei) Zhang, Philip S. Yu, Tianbing Xu* Classification by Discriminative Regularization *Bin Zhang, Fei Wang, Ta-Hsin Li, Wen jun Yin, Jin Dong* CRF-OPT: An Efficient High-Quality Conditional Random Field Solver *Minmin Chen, Yixin Chen, Michael R. Brent*	**Physically Grounded AI: Mobile Robotics / Planning** Efficient Optimization of Information-Theoretic Exploration in SLAM *Thomas Kollar, Nicholas Roy* An Efficient Motion Planning Algorithm for Stochastic Dynamic Systems with Constraints on Probability of Failure *Masahiro Ono, Brian C. Williams* Planning for Human-Robot Interaction Using Time-State Aggregated POMDPs *Frank Broz, Illah Nourbakhsh, Reid Simmons*	**IAAI-08 Invited Talk: Robert S. Engelmore Memorial Award Lecture (Regency Ballroom A/B)** Toward Cognitive Prostheses *Kenneth M. Ford (Florida Institute for Human and Machine Cognition [IHMC])*
11:30 AM–12:30 PM	**Planning and Scheduling under Uncertainty 1** Generating Plans in Concurrent, Probabilistic, Over-Subscribed Domains *Li Li, Nilufer Onder* Towards Faster Planning with Continuous Resources in Stochastic Domains *Janusz Marecki, Milind Tambe* Partitioned External-Memory Value Iteration *Peng Dai, Mausam, Daniel S. Weld*	**Ensemble Learning** Constraint Projections for Ensemble Learning *Daoqiang Zhang, Songcan Chen, Zhi-Hua Zhou, Qiang Yang* From Comparing Clusterings to Combining Clusterings *Zhiwu Lu, Yuxin Peng, Jianguo Xiao* Semi-Supervised Ensemble Ranking *Steven C.H. Hoi, Rong Jin*	**Physically Grounded AI: Activity Recognition** The Hidden Permutation Model and Location-Based Activity Recognition *Hung H. Bui, Dinh Phung, Svetha Venkatesh, Hai Phan* CIGAR: Concurrent and Interleaving Goal and Activity Recognition *Derek Hao Hu, Qiang Yang* Feature Selection for Activity Recognition in Multi-Robot Domains *Douglas L. Vail, Manuela M. Veloso*	**IAAI Emerging** Learning Sparse Kernels from 3D Surfaces for Heart Wall Motion Abnormality Detection *Glenn Fung, Sriram Krishnan, R. Bharat Rao, Hui Chen* On-line Recognition of Surgical Activity for Monitoring in the Operating Room *N. Padoy, T. Blum, H. Feussner, M-O. Berger, N. Navab*
1:50-2:50 PM				**IAAI Emerging** Local Search for Optimal Global Map Generation Using Mid-Decadal Landsat Images *Robert A. Morris, John Gasch, Lina Khatib, Steven Covington* Learning to Improve Earth Observation Flight Planning *Robert A. Morris, Nikunj Oza, Leslie Keely, Elif Kürklü, Anthony Strawa*
3:00–4:00 PM	**Planning and Scheduling under Uncertainty 2** Unknown Rewards in Finite-Horizon Domains *Colin McMillen, Manuela Veloso* Fusing Procedural and Declarative Planning Goals for Nondeterministic Domains *Dzmitry Shaparau, Marco Pistore, Paolo Traverso* Route Planning under Uncertainty: The Canadian Traveller Problem *Evdokia Nikolova, David R. Karger*	**Reasoning about Actions and Plans** On-Line Case-Based Plan Adaptation for Real-Time Strategy Games *Neha Sugandh, Santiago Ontañón, Ashwin Ram* HTN-MAKER: Learning HTNs with Minimal Additional Knowledge Engineering Required *Chad Hogg, Héctor Muñoz-Avila, Ugur Kuter* Efficient Learning of Action Schemas and Web-Service Descriptions *Thomas J. Walsh, Michael L. Littman*	**Physically Grounded AI: Model Transfer** Transferring Localization Models across Space *Sinno Jialin Pan, Dou Shen, Qiang Yang, James T. Kwok* Transferring Multi-device Localization Models using Latent Multi-task Learning *Vincent Wenchen Zheng, Sinno Jialin Pan, Qiang Yang, Jeffrey Junfeng Pan* Transferring Localization Models over Time *Vincent Wenchen Zheng, Evan Wei Xiang, Qiang Yang, Dou Shen*	**IAAI Emerging** A Hybrid Approach to Convoy Movement Planning in an Urban City *Ramesh Thangarajoo, Lucas Agussurja, Hoong Chuin Lau* A Vehicle Routing System to Solve a Periodic Vehicle Routing Problem for a Food Chain in Hong Kong *Jianfeng Zhu, Wenbin Zhu, Chan Hou Che, Andrew Lim*
4:20–5:20 PM	**Senior Papers 2** Intelligence in Wikipedia *Daniel S. Weld, Fei Wu, Eytan Adar, Saleema Amershi, James Fogarty, Raphael Hoffmann, Kayur Patel, Michael Skinner* Artificial Intelligence Needs Open-Access Knowledgebase Contents *Erik Sandewall*	**Transfer Learning and Activity Recognition** Transfer Learning via Dimensionality Reduction *Sinno Jialin Pan, James T. Kwok, Qiang Yang* Zero-data Learning of New Tasks *Hugo Larochelle, Dumitru Erhan, Yoshua Bengio* Learning Hidden Curved Exponential Family Models to Infer Face-to-Face Interaction Networks from Situated Speech Data *Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes*	**Physically Grounded AI: Reinforcement Learning** Maximum Entropy Inverse Reinforcement Learning *Brian D. Ziebart, Andrew Maas, J. Andrew Bagnell, Anind K. Dey* Adaptive Importance Sampling with Automatic Model Selection in Value Function Approximation *Hirotaka Hachiya, Takayuki Akiyama, Masashi Sugiyama, Jan Peters*	**IAAI Emerging** Application of Artificial Intelligence to Operational Real-Time Clear-Air Turbulence Prediction *Jennifer Abernethy, Robert Sharman, Elizabeth Bradley* COACH — Cumulative Online Algorithm for Classification of Handwriting Deficiencies *Ariella Richardson, Sarit Kraus, Patrice L. Weiss, Sara Rosenblum*
EVENING	**Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.** **Poster Demo Reception, 6:00–9:30 PM**			

	REGENCY C / CC23	REGENCY A / CC12A	CC12B	CC12C
9:00–10:00 AM	**AAI Invited Talk (Regency C)** Sense and Sensibility: Sentiment Analysis, Opinion Mining, and the Computational Treatment of Subjective Language *Lillian Lee (Cornell University)*	**AAAI Invited Talk (Regency A)** From Images to Scenes: Using Lots of Data to Infer Geometric, Photometric and Semantic Scene Properties from a Single Image *Alexei A. Efros (Carnegie Mellon University)*		
10:20–11:20 AM	**AI and the Web: Ontologies (CC23)** Supporting Manual Mapping Revision using Logical Reasoning *Christian Meilicke, Heiner Stuckenschmidt, Andrei Tamilin* Decoding Wikipedia Categories for Knowledge Acquisition *Vivi Nastase, Michael Strube* Neural Network based Constraint Satisfaction in Ontology Mapping *Ming Mao, Yefei Peng, Michael Spring*	**Nectar: Constraint Satisfaction (CC12A)** Decompositions of Grammar Constraints *Claude-Guy Quimper, Toby Walsh* Breaking Value Symmetry *Toby Walsh*	**Multiagent Systems, Game Theory** A Computational Analysis of the Tournament Equilibrium Set *Felix Brandt, Felix Fischer, Paul Harrenstein, Maximilian Mair* On the Dimensionality of Voting Games *Edith Elkind, Leslie Ann Goldberg, Paul Goldberg, Michael Wooldridge* Approximability of Manipulating Elections *Eric Brelsford, Piotr Faliszewski, Edith Hemaspaandra, Henning Schnoor, Ilka Schnoor*	**Description Logics** Terminological Reasoning in *SHIQ* with Ordered Binary Decision Diagrams *Sebastian Rudolph, Markus Krötzsch, Pascal Hitzler* Prime Implicate Normal Form for *ALC* Concepts *Meghyn Bienvenu* Worst-case Optimal Conjunctive Query Answering for an Expressive Description Logic without Inverses *Magdalena Ortiz, Mantas Simkus, Thomas Eiter*
11:30 AM–12:30 PM	**Nectar: Learning (CC23)** Using Signals of Human Interest to Enhance Single-document Summarization *Krysta M. Svore, Lucy Vanderwende, Christopher J.C. Burges* An Analysis of Transformational Analogy: General Framework and Complexity *Vithal Kuchibatla, Héctor Muñoz-Avila* Learning and Inference with Constraints *Ming-Wei Chang, Lev Ratinov, Nicholas Rizzolo, Dan Roth*	**Satisfiability 3 (CC12A)** Clause Learning Can Effectively P-Simulate General Propositional Resolution *Philipp Hertel, Fahiem Bacchus, Toniann Pitassi, Allen Van Gelder* Relaxed Survey Propagation: A Sum-Product Algorithm for Max-SAT *Hai Leong Chieu, Wee Sun Lee* Phase Transitions and Complexity of Weighted Satisfiability and Other Intractable Parameterized Problems *Yong Gao*	**Multiagent Systems: Uncertainty** Value-Based Policy Teaching with Active Indirect Elicitation *Haoqi Zhang, David Parkes* Generalized Point Based Value Iteration for Interactive POMDPs *Prashant Doshi, Dennis Perez* Bayesian Coalitional Games *Samuel Ieong, Yoav Shoham, Philip Kilby, Vangelis Markakis, Pinar Keskinocak*	**Automated Reasoning** An Extended Interpreted System Model for Epistemic Logics *Kaile Su, Abdul Sattar* New Compilation Languages Based on Structured Decomposability *Knot Pipatsrisawat, Adnan Darwiche* Grounding with Bounds *Johan Wittocx, Maarten Mariën, Marc Denecker*
1:50-2:50 PM	**Nectar: Learning and Activity Recognition (CC23)** Make3D: Depth Perception from a Single Still Image *Ashutosh Saxena, Min Sun, Andrew Y. Ng* Achieving Master Level Play in 9 x 9 Computer Go *Sylvain Gelly, David Silver* Video Activity Recognition in the Real World *Anthony Hoogs, A. G. Amitha Perera*	**Game Playing (CC12A)** Simulation-Based Approach to General Game Playing *Hilmar Finnsson, Yngvi Bj"rnsson* On Range of Skill *Thomas Dueholm Hansen, Peter Bro Miltersen, Troels Bjerre S¯rensen*	**Argumentation** Pareto Optimality in Abstract Argumentation *Iyad Rahwan, Kate Larson* Argument Theory Change Applied to Defeasible Logic Programming *Martìn O. Moguillansky, Nicolás D. Rotstein, Marcelo A. Falappa, Alejandro J. Garcìa, Guillermo R. Simari* Reasoning about the Appropriateness of Proponents for Arguments *Anthony Hunter*	**Answer Set Programming 2** Hyperequivalence of Logic Programs with Respect to Supported Models *Miroslaw Truszczynski, Stefan Woltran* Loop Formulas for Logic Programs with Arbitrary Constraint Atoms *Jia-Huai You, Guohua Liu* A Meta-Programming Technique for Debugging Answer-Set Programs *Martin Gebser, Jörg Pührer, Torsten Schaub, Hans Tompits*
3:00–4:00 PM	**Nectar / Senior: Knowledge Representation and Logic (CC23)** *Nectar:* Abduction with Bounded Treewidth: From Theoretical Tractability to Practically Efficient Computation *Georg Gottlob, Reinhard Pichler, Fang Wei* *Nectar:* Magic Sets for Data Integration *Wolfgang Faber, Gianluigi Greco, Nicola Leone* *Senior:* What Is Answer Set Programming? *Vladimir Lifschitz*	**Computational Biology (CC12A)** Generating Application-Specific Benchmark Models for Complex Systems *Jun Wang, Gregory Provan* Using Knowledge Driven Matrix Factorization to Reconstruct Modular Gene Regulatory Network *Yang Zhou, Zheng Li, Xuerui Yang, Linxia Zhang, Shireesh Srivastava, Rong Jin, Christina Chan*	**Distributed COP** Resource Constrained Distributed Constraint Optimization with Virtual Variables *Toshihiro Matsui, Hiroshi Matsuo, Marius Silaghi, Katsutoshi Hirayama, Makoto Yokoo* Anytime Local Search for Distributed Constraint Optimization *Roie Zivan* H-DPOP: Using Hard Constraints for Search Space Pruning in DCOP *Akshat Kumar, Adrian Petcu, Boi Faltings*	**Logic Programming and Knowledge Engineering** Revising Imprecise Probabilistic Beliefs in the Framework of Probabilistic Logic Programming *Anbu Yue, Weiru Liu* Abductive Logic Programming by Non-ground Rewrite Systems *Fangzhen Lin, Jia-Huai You* Minimal Contraction of Preference Relations *Denis Mindolin, Jan Chomicki*
4:20–5:20 PM	**AI and the Web: Mining Web Logs and Blogs (CC23)** Mining Translations of Web Queries from Web Click-through Data *Rong Hu, Weizhu Chen, Jian Hu, Yansheng Lu, et al.* Finding Cars, Goddesses and Enzymes: Parametrizable Acquisition of Labeled Instances for Open-Domain Information Extraction *Benjamin Van Durme, Marius Pasca* Hierarchical Location and Topic Based Query Expansion *Shu Huang, Q. Zhao, P. Mitra, C. Lee Giles*		**Multiagent Systems 3** Achieving Cooperation in a Minimally Constrained Environment *Steven Damer, Maria Gini* Computer-Aided Proofs of Arrow's and Other Impossibility Theorems *Fangzhen Lin, Pingzhong Tang*	**Computational Complexity** On the Decidability of Role Mappings between Modular Ontologies *Jie Bao, George Voutsadakis, Giora Slutzki, Vasant Honavar* Extending the Knowledge Compilation Map: Krom, Horn, Affine and Beyond *Hélène Fargier, Pierre Marquis*

Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.

	CC12D	CC11A	CC11B	CC24 / IAAI
9:00–10:00 AM				**IAAI Emerging** Diagnosing Faults in Electrical Power Systems of Spacecraft and Aircraft *Ole J. Mengshoel, Adnan Darwiche, et al.* Real-time Alert Correlation Using Stream Data Mining Techniques *Reza Sadoddin, Ali A. Ghorbani*
10:20–11:20 AM	**Model-Based Reasoning 1** Computing Observation Vectors for Max-Fault Min-Cardinality Diagnoses *Alexander Feldman, Gregory Provan, Arjan van Gemund* Computing Minimal Diagnoses by Greedy Stochastic Search *Alexander Feldman, Gregory Provan, Arjan van Gemund* Optimal Metric Planning with State Sets in Automata Representation *Björn Ulrich Borowsky, Stefan Edelkamp*	**Kernel Methods and Neural Networks** A Case Study on the Critical Role of Geometric Regularity in Machine Learning *Jason Gauci, Kenneth O. Stanley* Dimension Amnesic Pyramid Match Kernel *Yi Liu, Xu-Lei Wang, Hongbin Zha* Manifold Integration with Markov Random Walks *Heeyoul Choi, Seungjin Choi, Yoonsuck Choe*	**Physically Grounded AI: Vision / Activity Recognition** Multimodal People Detection and Tracking in Crowded Scenes *Luciano Spinello, Rudolph Triebel, Roland Siegwart* Structure Learning on Large Scale Common Sense Statistical Models of Human State *William Pentney, Matthai Philipose, Jeff Bilmes* Reducing Particle Filtering Complexity for 3D Motion Capture using Dynamic Bayesian Networks *Cédric Rose, Jamal Saboune, François Charpillet*	**IAAI Invited Talk** Realizing Claytronics: A Challenge for AI *Seth Copen Goldstein (Carnegie Mellon University)*
11:30 AM–12:30 PM	**Reasoning about Action and Change** Learning Generalized Plans Using Abstract Counting *Siddharth Srivastava, Neil Immerman, Shlomo Zilberstein* Finding State Similarities for Faster Planning *Christian Fritz* Reasoning about Large Taxonomies of Actions *Yilan Gu, Mikhail Soutchanski*	**Feature Selection** Bounding the False Discovery Rate in Local Bayesian Network Learning *Ioannis Tsamardinos, Laura E. Brown* Trace Ratio Criterion for Feature Selection *Feiping Nie, Shiming Xiang, Yangqing Jia, Changshui Zhang, Shuicheng Yan* Markov Blanket Feature Selection for Support Vector Machines *Jianqiang Shen, Lida Li, Weng-Keen Wong*	**Physically Grounded AI: Robotics / Perception** A Fast Data Collection and Augmentation Procedure for Object Recognition *Benjamin Sapp, Ashutosh Saxena, Andrew Y. Ng* Anticipatory Perceptual Simulation for Human-Robot Joint Practice: Theory and Application Study *Guy Hoffman, Cynthia Breazeal*	**IAAI Deployed** The Law of Choice and the Decision Not to Decide *David C. Wilson, Suzanne Leland, Kenneth Godwin, Andrew Baxter, Ashley Levy, Jamie Smart, Nadia Najjar, Jayakrishnan Andaparambil* **IAAI Emerging** Adaptive Treatment of Epilepsy via Batch-mode Reinforcement Learning *Arthur Guez, Robert D. Vincent, Massimo Avoli, Joelle Pineau*
1:50-2:50 PM	**Graphical Models** Dormant Independence *Ilya Shpitser, Judea Pearl* A General Framework for Generating Multivariate Explanations in Bayesian Networks *Changhe Yuan, Tsai-Ching Lu* Lifted Probabilistic Inference with Counting Formulas *Brian Milch, Luke S. Zettlemoyer, Kristian Kersting, Michael Haimes, Leslie Pack Kaelbling*	**Natural-Language Processing 3** Hidden Dynamic Probabilistic Models for Labeling Sequence Data *Xiaofeng Yu, Wai Lam* Adapting ADtrees for High Arity Features *Robert Van Dam, Irene Langkilde-Geary, Dan Ventura* Active Learning for Pipeline Models *Dan Roth, Kevin Small*	**Human Computer Interaction 1** Automating To-Do Lists for Users: Interpretation of To-Dos for Selecting and Tasking Agents *Yolanda Gil, Varun Ratnakar* Prediction and Change Detection in Sequential Data for Interactive Applications *Jun Zhou, Li Cheng, Walter F. Bischof*	
3:00–4:00 PM	**POMDPs** A Variance Analysis for POMDP Policy Evaluation *Mahdi Milani Fard, Joelle Pineau, Peng Sun* Symbolic Heuristic Search Value Iteration for Factored POMDPs *Hyeong Seop Sim, Kee-Eung Kim, Jin Hyung Kim, Du-Seong Chang, Myoung-Wan Koo* Exploiting Symmetries in POMDPs for Point-Based Algorithms *Kee-Eung Kim*	**Reinforcement Learning / Invited Nectar** Economic Hierarchical Q-Learning *Erik G. Schultink, Ruggiero Cavallo, David C. Parkes* Potential-based Shaping in Model-based Reinforcement Learning *John Asmuth, Michael L. Littman, Robert Zinkov* *Nectar:* Predicting Human Brain Activity Associated with the Meanings of Nouns *Tom Mitchell, Svetlana Shinkareva, Andrew Carlson, Kai-Min Chang, Vicente Malave, Rob Mason, Marcel Just*	**Human Computer Interaction 2** Exposing Parameters of a Trained Dynamic Model for Interactive Music Creation *Dan Morris, Ian Simon, Sumit Basu* Another Look at Search-Based Drama Management *Mark J. Nelson, Michael Mateas* Towards Automatic Animated Storyboarding *Patrick Ye, Timothy Baldwin*	
4:20–5:20 PM	**Model-Based Reasoning 2** A Scalable Jointree Algorithm for Diagnosability *Anika Schumann, Jinbo Huang* A Formalization of Program Debugging in the Situation Calculus *Yongmei Liu*	**Decision Making** Preference Aggregation with Graphical Utility Models *Christophe Gonzales, Patrice Perny, Sergio Queiroz* Optimal Testing of Structured Knowledge *Michael Munie, Yoav Shoham* Piecewise Linear Dynamic Programming for Constrained POMDPs *Joshua D. Isom, Sean P. Meyn, Richard D. Braatz*	**Natural-Language Processing 4** Cross-lingual Propagation for Morphological Analysis *Benjamin Snyder, Regina Barzilay* Speech-enabled Card Games for Language Learners *Ian McGraw, Stephanie Seneff* Discourse Topic and Gestural Form *Jacob Eisenstein, Regina Barzilay, Randall Davis*	

Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.

Poster Session

The poster session will be held Wednesday, July 16, in the Regency Ballroom, from 6:00–9:30 PM. Please see page 9 for the list of Intelligent Systems Demonstrations.

AAAI-08 Main Track Technical Papers

Agents, Game Theory, Auctions, and Mechanism Design

Approximability of Manipulating Elections
Eric Brelsford, Piotr Faliszewski, Edith Hemaspaandra, Henning Schnoor, Ilka Schnoor

Reasoning about the Appropriateness of Proponents for Arguments
Anthony Hunter

Computer-Aided Proofs of Arrow's and Other Impossibility Theorems
Fangzhen Lin, Pingzhong Tang

Resource Constrained Distributed Constraint Optimization with Virtual Variables
Toshihiro Matsui, Hiroshi Matsuo, Marius Silaghi, Katsutoshi Hirayama, Makoto Yokoo

Argument Theory Change Applied to Defeasible Logic Programming
Martln O. Moguillansky, Nicolás D. Rotstein, Marcelo A. Falappa, Alejandro J. Garcla, Guillermo R. Simari

Optimal False-Name-Proof Voting Rules with Costly Voting
Liad Wagman, Vincent Conitzer

Value-Based Policy Teaching with Active Indirect Elicitation
Haoqi Zhang, David Parkes

Constraints, Satisfiability, and Search

Relaxed Survey Propagation: A Sum-Product Algorithm for Max-SAT
Hai Leong Chieu, Wee Sun Lee

Simulation-Based Approach to General Game Playing
Hilmar Finnsson, Yngvi Björnsson

Phase Transitions and Complexity of Weighted Satisfiability and Other Intractable Parameterized Problems
Yong Gao

On the Power of Top-Down Branching Heuristics
Matti Järvisalo, Tommi Junttila

Knowledge Representation, Logic, and Information Systems

Prime Implicate Normal Form for ALC Concepts
Meghyn Bienvenu

A Meta-Programming Technique for Debugging Answer-Set Programs
Martin Gebser, Jörg Puhrer, Torsten Schaub, Hans Tompits

An AGM-Based Belief Revision Mechanism for Probabilistic Spatio-Temporal Logics
Austin Parker, Guillaume Infantes, V. S. Subrahmanian, John Grant

Terminological Reasoning in SHIQ with Ordered Binary Decision Diagrams
Sebastian Rudolph, Markus Krötzsch, Pascal Hitzler

Towards Automatic Animated Storyboarding
Patrick Ye, Timothy Baldwin

Machine Learning

Distance Metric Learning Versus Fisher Discriminant Analysis
Babak Alipanahi, Michael Biggs, Ali Ghodsi

Economic Hierarchical Q-Learning
Erik G. Schultink, Ruggiero Cavallo, David C. Parkes

Multidisciplinary Topics and Applications

Automating To-Do Lists for Users: Interpretation of To-Dos for Selecting and Tasking Agents
Yolanda Gil, Varun Ratnakar

Exposing Parameters of a Trained Dynamic Model for Interactive Music Creation
Dan Morris, Ian Simon, Sumit Basu

Learning to Analyze Binary Computer Code
Nathan Rosenblum, Xiaojin Zhu, Barton Miller, Karen Hunt

Prediction and Change Detection in Sequential Data for Interactive Applications
Jun Zhou, Li Cheng, Walter F. Bischof

Using Knowledge Driven Matrix Factorization to Reconstruct Modular Gene Regulatory Network
Yang Zhou, Zheng Li, Xuerui Yang, Linxia Zhang, Shireesh Srivastava, Rong Jin, Christina Chan

Natural-Language Processing

Single Document Keyphrase Extraction Using Neighborhood Knowledge
Xiaojun Wan, Jianguo Xiao

Reasoning about Plans, Processes, and Actions

Computing Minimal Diagnoses by Greedy Stochastic Search
Alexander Feldman, Gregory Provan, Arjan van Gemund

How Good is Almost Perfect?
Malte Helmert, Gabriele Röger

On the Progression of Situation Calculus Basic Action Theories: Resolving a 10-year-old Conjecture
Stavros Vassos, Hector J. Levesque

Probabilistic Planning via Determinization in Hindsight
Sungwook Yoon, Alan Fern, Robert Givan, Subbarao Kambhampati

Uncertainty in AI

Focusing Generalizations of Belief Propagation on Targeted Queries
Arthur Choi, Adnan Darwiche

Exploiting Symmetries in POMDPs for Point-Based Algorithms
Kee-Eung Kim

A General Method for Reducing the Complexity of Relational Inference and its Application to MCMC
Hoifung Poon, Pedro Domingos, Marc Sumner

Lifted First-Order Belief Propagation
Parag Singla, Pedro Domingos

Hybrid Markov Logic Networks
Jue Wang, Pedro Domingos

Latent Tree Models and Approximate Inference in Bayesian Networks
Yi Wang, Nevin L. Zhang, Tao Chen

Special Tracks

Artificial Intelligence and the Web

Metalevel Information in Ontology-Based Applications
Thanh Tran, Peter Haase, Boris Motik, Bernardo Cuenca Grau, Ian Horrocks

Finding Cars, Goddesses and Enzymes: Parametrizable Acquisition of Labeled Instances for Open-Domain Information Extraction
Benjamin Van Durme, Marius Pasca

Integrated Intelligence

POIROT – Integrated Learning of Web Service Procedures
Mark Burstein, Robert Laddaga, David McDonald, Michael Cox, Brett Benyo, Paul Robertson, Talib Hussain, Marshall Brinn, Drew McDermott

RADAR: A Personal Assistant that Learns to Reduce Email Overload
Michael Freed, Jaime Carbonell, Geoff Gordon, Jordan Hayes, Brad Myers, Daniel Siewiorek, Stephen Smith, Aaron Steinfeld, Anthony Tomasic

Incorporating Mental Simulation for a More Effective Robotic Teammate
William G. Kennedy, Magdalena D. Bugajska, William Adams, Alan C. Schultz, J. Gregory Trafton

Pervasive Diagnosis: The Integration of Diagnostic Goals into Production Plans
Lukas Kuhn, Bob Price, Johan de Kleer, Minh Do, Rong Zhou

Adaptive Control for Autonomous Underwater Vehicles
Conor McGann, Frederic Py, Kanna Rajan, John Ryan, Richard Henthorn

Physically Grounded Artificial Intelligence

Planning for Human-Robot Interaction Using Time-State Aggregated POMDPs
Frank Broz, Illah Nourbakhsh, Reid Simmons

The Hidden Permutation Model and Location-Based Activity Recognition
Hung H. Bui, Dinh Phung, Svetha Venkatesh, Hai Phan

CIGAR: Concurrent and Interleaving Goal and Activity Recognition
Derek Hao Hu, Qiang Yang

Transferring Localization Models across Space
Sinno Jialin Pan, Dou Shen, Qiang Yang, James T. Kwok

Maximum Entropy Inverse Reinforcement Learning
Brian D. Ziebart, Andrew Maas, J. Andrew Bagnell, Anind K. Dey

Short Papers

Interaction Structure and Dimensionality Reduction in Decentralized MDPs
Martin Allen, Marek Petrik, Shlomo Zilberstein

Generating Hard SAT/CSP Instances Using Expander Graphs
Carlos Ansótegui, Ramón Béjar, Cèsar Fernández, Carles Mateu

An Effective and Robust Method for Short Text Classification
Victoria Bobicev, Marina Sokolova

Hybrid Constraint Tightening for Solving Hybrid Scheduling Problems
James C. Boerkoel Jr., Edmund H. Durfee

Data-Driven Programming and Behavior for Autonomous Virtual Characters
Jonathan Dinerstein, Parris K. Egbert, Dan Ventura, Michael Goodrich

Limits and Possibilities of BDDs in State Space Search
Stefan Edelkamp, Peter Kissmann

Expectation-Based Versus Potential-Aware Automated Abstraction in Imperfect Information Games: An Experimental Comparison Using Poker
Andrew Gilpin, Tuomas Sandholm

Learning to Identify Reduced Passive Verb Phrases with a Shallow Parser
Sean Igo, Ellen Riloff

The Re-Representation Problem in a Logic-Based Framework for Analogy Making
Ulf Krumnack, Helmar Gust, Kai-Uwe Kuhnberger, Angela Schwering

A Bayesian Kernel Logistic Discriminant Model: An Improvement to the Kernel Fisher's Discriminant
R. Ksantini, D. Ziou, B. Colin, F. dubeau

Dynamic Distributed Constraint Reasoning
Robert N. Lass, Evan A. Sultanik, William C. Regli

Ensemble Forecasting for Disease Outbreak Detection
Thomas H. Lotze, Galit Shmueli

Fast Spectral Learning using Lanczos Eigenspace Projections
Sridhar Mahadevan

Efficiently Exploiting Dependencies in Local Search for SAT
Duc Nghia Pham, John Thornton, Abdul Sattar

Towards Synthesizing Optimal Coordination Modules for Distributed Agents
Manh Tung Pham, Kiam Tian Seow

A New Clause Learning Scheme for Efficient Unsatisfiability Proofs
Knot Pipatsrisawat, Adnan Darwiche

Bayes-Relational Learning of Opponent Models from Incomplete Information in No-Limit Poker
Marc Ponsen, Jan Ramon, Tom Croonenborghs, Kurt Driessens, Karl Tuyls

Multi-HDP: A Non Parametric Bayesian Model for Tensor Factorization
Ian Porteous, Evgeniy Bart, Max Welling

Learning Grasp Strategies with Partial Shape Information
Ashutosh Saxena, Lawson L. S. Wong, Andrew Y. Ng

Incremental Algorithms for Approximate Compilation
Alberto Venturini, Gregory Provan

Computing Reserve Prices and Identifying the Value Distribution in Real-world Auctions with Market Disruptions
William E. Walsh, David C. Parkes, Tuomas Sandholm, Craig Boutilier

Multi-Label Dimensionality Reduction via Dependence Maximization
Yin Zhang, Zhi-Hua Zhou

Online Learning in Monkeys
Xiaojin Zhu, Michael Coen, Shelley Prudom, Ricki Colman, Joseph Kemnitz

AI Teaching Forum

Gridworld Search and Rescue: A Project Framework for a Course in Artificial Intelligence
Eric Eaton

Low-Cost Localization for Educational Robotic Platforms via an External Fixed-Position Camera
Drew Housten

Teaching Forward-Chaining Planning with JAVAFF
Andrew Coles

Developing a Text-Based MMORPG to Motivate Students in CS1
Richard Barnes, Maria Gini

Student Abstracts

Using Reasoning Patterns to Simplify Games
Dimitrios Antos, Avi Pfeffer

Lexical and Grammatical Inference
Tom Armstrong, Tim Oates

The Benefits of an Ontological Patient Model in Clinical Decision-Support
Mark Austin, Matthew Kelly, Sir Michael Brady

Using Clustering Methods for Discovering Event Structures
Cosmin Adrian Bejan, Sanda Harabagiu

Distributed Reasoning with Conflicts in a Multi-Context Framework
Antonis Bikakis, Grigoris Antoniou

Conformant Planning Heuristics Based on Plan Reuse in Belief States
Dunbo Cai, Jigui Sun, Minghao Yin

Personalized Reasoner Based on Belief Strengths of Information Sources
Shu-Bin Cai, Zhong Ming, Shi-Xian Li

A Neuro-Fuzzy Strategy for Web Personalization
G. Castellano, A. M. Fanelli, P. Plantamura, M. A. Torsello

Sketch Recognition Based on Manifold Learning
Heeyoul Choi, Tracy Hammond

GLADDER: Combining Gesture and Geometric Sketch Recognition
Paul Corey, Tracy Hammond

Distinguishing between Sketched Scribble Look Alikes
Katie Dahmen, Tracy Hammond

Perpetual Learning for Non-Cooperative Multiple Agents
Luke Dickens

User Identification by Means of Sketched Stroke Features
Brian David Eoff, Tracy Hammond

Unsupervised Categorization (Filtering) of Google Images Based on Visual Consistency
Pooyan Fazli, Ara Bedrosian

Existentially Quantified Values for Queries and Updates of Facts in Transaction Logic Programs
Paul Fodor

Querying Sequential and Concurrent Horn Transaction Logic Programs Using Tabling Techniques
Paul Fodor

Predicting Appropriate Semantic Web Terms from Words
Lushan Han, Tim Finin

Improving a Plan Library for Real-time Systems Using Nearly Orthogonal Latin Hypercube Sampling
Robert Holder

Text Beautifier: An Affective-Text Tool to Tailor Written Text
Fahim Kawsar, Mostafa Al Masum Shaikh, Mitsuru Ishizuka

A Self-organizing Multi-agent System for Adaptive Continuous Unsupervised Learning in Complex Uncertain Environments
Igor Kiselev, Reda Alhajj

Loop Calculus for Satisfiability
Lukas Kroc, Michael Chertkov

Constrained Classification on Structured Data
Chi-Hoon Lee, Matthew Brown, Russell Greiner, Shoajun Wang, Albert Murtha

Chatting Activity Recognition in Social Occasions Using Factorial Conditional Random Fields with Iterative Classification
Chia-chun Lian, Jane Yung-jen Hsu

Discover Relevant Environment Feature Using Concurrent Reinforcement Learning
Zhihui Luo, David Bell, Barry McCollum

2-Dimensional Cellular Automata Approach for Robot Grid Formations
Ross Mead, Jerry B. Weinberg

Hierarchical Voting Experts: An Unsupervised Algorithm for Segmenting Hierarchically Structured Sequences
Matthew Miller, Alexander Stoytchev

The Swarm Application Framework
Don Miner, Marie desJardins, Peter Hamilton

ADROIT: Automatic Discourse Relation Organizer of Internet-based Text
A. S. M. Mahbub Morshed, Mitsuru Ishizuka

NP-Completeness of Outcome Optimization for Partial CP-Nets
Keith Purrington, Edmund H. Durfee

Toward Autonomous Learning of an Ontology of Tool Affordances by a Robot
Jivko Sinapov, Alexander Stoytchev

The Validity of Providing Automated Hints in an ITS Using a MDP
John C. Stamper, Tiffany Barnes

Using a Geometric-Based Sketch Recognition Approach to Sketch Chinese Radicals
Paul Taele, Tracy Hammond

Efficient Haplotype Inference with Answer Set Programming
Ferhan Ture, Esra Erdem

Eliminating False Positives during Corner Finding by Merging Similar Segments
Aaron Wolin, Brandon Paulson, Tracy Hammond

Visualization of Large-Scale Weighted Clustered Graph: A Genetic Approach
Jiayu Zhou, Youfang Lin, Xi Wang

Doctoral Consortium Abstracts

The Relational Push-Pull Model: A Generative Model for Relational Data Clustering
Adam Anthony

Towards Answer Set Prolog Based Architectures for Intelligent Agents
Sandeep Chintabathina

Unstructured Audio Classification for Environment Recognition
Selina Chu

An Architecture and Formalism for Handling Modular Ontologies
Faezeh Ensan

Optimizations and Extensions for the Horn Transaction Logic Programs
Paul Fodor

Social Interaction under Uncertainty in Multi Agent Systems
Noam Hazon

Tightly Coupled Cooperation among Independent Agents
Daylond Hooper

Autonomous Robot Skill Acquisition
George Konidaris

Generating Plans in Concurrent, Probabilistic, Over-Subscribed Domains
Li Li

Adaptive Abstraction of Constraint-Based Models for Self-Diagnosis and Planning
Paul Maier

Distributed Robust Execution of Qualitative State Plan with Chance Constraints
Masahiro Ono

Combining Global Relevance Information with Local Contextual Clues for Event-Oriented Information Extraction
Siddharth Patwardhan

Computational Influence for Training and Entertainment
David L. Roberts

Integrative Construction and Analysis of Condition-specific Biological Networks
Sushmita Roy, Terran Lane, Margaret Werner-Washburne

Managing Quality of Service with Soft Constraints
Francesco Santini

Regency Ballroom Poster / Demo Floorplan

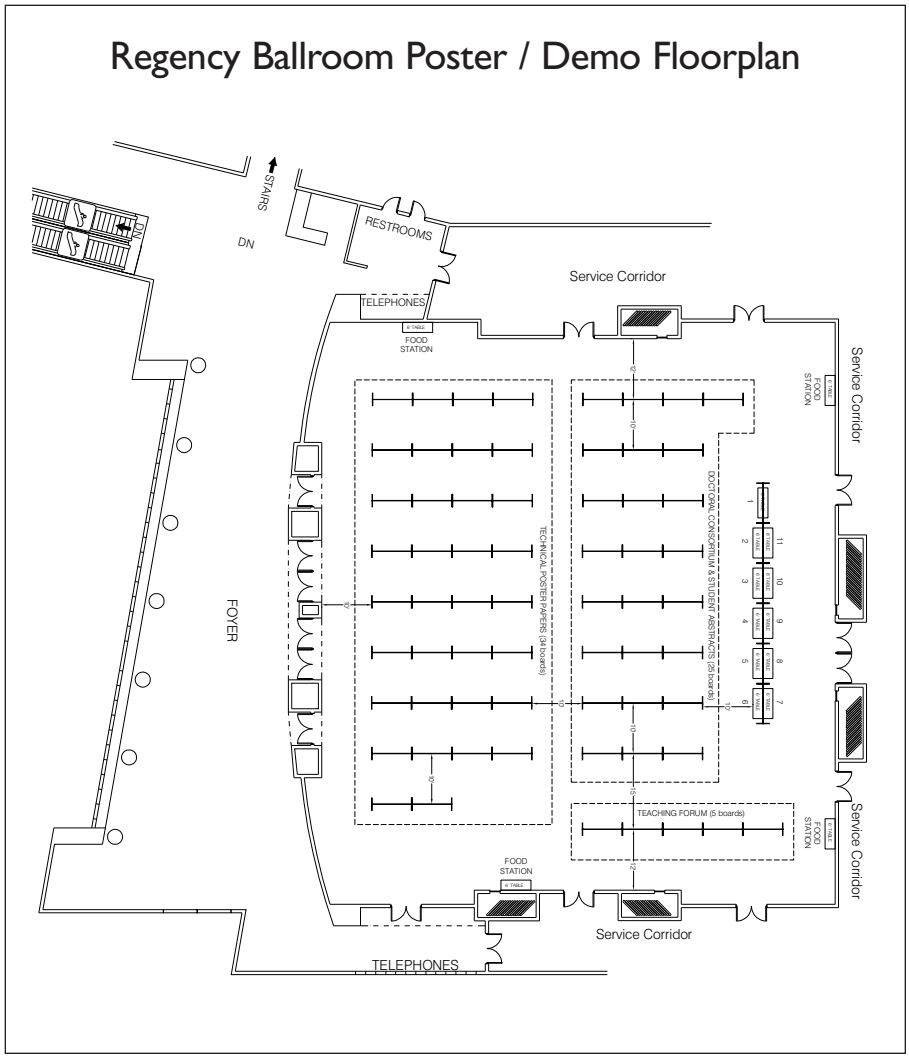

Exhibit Program

The Exhibit Program will be held Tuesday – Thursday, July 15–17 in the Pullman Room, Hyatt Prairie Center, Conference Center, Second Floor

Exhibit Hours

Tuesday, July 15	9:00 AM – 5:00 PM
Wednesday, July 16	9:00 AM – 5:00 PM
Thursday, July 17	9:00 AM – 12:00 PM

BAE Systems Advanced Information Technologies (AIT)

6 New England Executive Park
Burlington, MA 01803

A 1979 spin-off from MIT, BAE Systems Advanced Information Technologies (AIT) is a research arm of BAE. The Intelligent Systems Division is a business unit within AIT. Our core competencies include but are not limited to knowledge-intensive artificial intelligence, probabilistic inference, and relational data mining. Stop by our exhibit table and meet some of our team.

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Visit the CUP stand for a 20 percent discount on all books and journals on display at AAAI-08. New editions of bestselling titles include the second edition of *The Description Logic Handbook* by Baader, et al and the second edition of *An Introduction to Non-Classical Logic* by Priest. Brand-new titles include *An Introduction to Many-Valued and Fuzzy Logic* by Bergmann; *Multiagent Systems* by Shoham and Leyton-Brown; *Introduction to Information Retrieval* by Manning et al; *How to Think About Algorithms* by Edmonds, and many more.

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Morgan & Claypool publishes the *Synthesis Lectures on Artificial Intelligence and Machine Learning* edited by Ron Brachman and Tom Dietterich. Synthesis lectures are 50–150 page revisable digital documents presenting key topics written by prominent contributors for an audience of students, researchers and developers. Synthesis lectures are available by institutional subscription to the Synthesis Digital Library of Engineering and Computer Science and for individual digital and print purchase. Just published: *Essentials of Game Theory* by Kevin Leyton-Brown and Yoav Shoham, *Representation Discovery Using Harmonic Analysis* by Sridhar Mahadevan, and *Action Programming Languages* by Michael Theilscher.

Qualitative Reasoning Group/Northwestern University

www.qrg.northwestern.edu/

The Qualitative Reasoning Group at Northwestern University explores how human cognition works and how to create cognitive systems. Our hypotheses are (1) qualitative representations are important for humanlike reasoning and learning (2) analogical reasoning and learning are central in human cognition and for building human-level reasoning and learning systems. We explore these ideas through research on sketch understanding, learning by reading, robust reasoning, conceptual change, battlespace reasoning, moral decision-making, and our Companions cognitive architecture. We collaborate heavily with psychologists, learning scientists, and other cognitive scientists. Please drop by and find out more about our research.

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USC Information Sciences Institute

4676 Admiralty Way
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ai.isi.edu

USC/ISI researchers will present information about the wide range of research projects in the AI group. Sitting right on the bike path that connects Malibu with Redondo Beach harbor, USC/ISI offers a unique environment for basic research, integrative research projects, and technology transfer — both commercial and open source. Active research areas include natural language processing, knowledge representation, planning, information integration, scientific data analysis, virtual humans, education technologies, and AI on the web. Researchers will be available to discuss opportunities at ISI for graduating Ph.D.s, visiting researchers, Ph.D. fellowships, summer interns, sabbaticals, and other forms for collaboration.

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Competitions

AI Video Competition

Monday, July 14, 7:00 – 8:00 PM
Regency Ballroom Foyer

AAAI is continuing this exciting event at AAAI-08, to be held immediately after the opening reception: The Second AI Video Competition Awards Ceremony! Come and see exciting videos about AI research and applications. The winners will be presented with a trophy named a "Shakey" — which honors SRI's pioneering robot.

The objective of this competition is to communicate to the world the fun of pursuing research in AI, and illustrate the impact of some of our applications. Submitters were asked to create narrated videos of 1-5 minutes in length. The submissions were reviewed by an international program committee, led by co-chairs David Aha and Sebastian Thrun. A special emphasis this year is on Educational Videos that focus on instructional use in the classroom; Michael Bowling will present its trophy. Don't miss the awards ceremony for this cool competition! AAAI gratefully acknowledges the generous contributions of Google, Microsoft, Yahoo!, and the AI Video Archive Project for their sponsorship.

General Game Playing Competition

Tuesday – Thursday, July 15 – 17
Room CC22, Level 2

General game players are systems able to accept declarative descriptions of arbitrary games at "runtime" and able to use such descriptions to play those games effectively without human intervention. Because game descriptions are presented at runtime, unlike specialized game players such as Deep Blue, general game players cannot rely on algorithms designed in advance for specific games. Instead, to perform well general game players must incorporate various artificial intelligence technologies and techniques such as knowledge representation, reasoning, learning, and rational decision-making. Moreover, they must do so in an integrated fashion.

While general game playing is a topic with inherent interest, work in its area has practical value as well. Its underlying technology can be used in a variety of other application areas, such as business process management, electronic commerce, and military operations.

This Year's Competition

This year's AAAI competition is designed to test the abilities of general game playing systems by comparing their performance on a variety of previously unseen games. The 2008 competition will consist of three rounds of competition held during June 2008, with a final championship round to be held in Chicago at the AAAI. Over the four rounds, each general game player will play approximately 80 matches, where the combined scores accumulated during those matches will be used to determine player rankings as well as the finalists in the championship round. The winner of the championship round will be crowned the winner of the competition, and its programmer(s) will be awarded a $10,000 prize.

Entrants will compete on a wide variety of games organized into taxonomies designed to isolate features of general games that are both exploitable and scientifically interesting. Examples of such taxonomies include number of players, branching factor, repeated states, and decomposability into independent sub-games. Entrants will be expected to play games that require both competition and cooperation, as well as games that may not be exhaustively searchable in the time allowed. Prior to competition, entrants will be told nothing about the games that they will play beyond the taxonomies that they will be organized into. Instead, the rules for all games will be transmitted to players electronically at the beginning of each match.

Computer Poker Competition

Tuesday – Wednesday, July 15 – 16
Room CC21, Level 2

For the Third Annual AAAI Computer Poker Competition, 14 teams from 7 countries will develop computer programs for playing heads-up limit and no-limit Texas Hold'em. New for this year's competition, there will also be a 6-player limit Texas Hold'em competition. Programs will be judged based upon their robustness (ability to beat any opponent head-to-head) and/or their ability to learn (to exploit weaker opponents for more money). At AAAI, the results, highlighted hands, and posters describing the bots will be presented. Visitors will have an opportunity to play against some of the submitted poker programs.

Trading Agent Competition

Monday – Wednesday, July 14 - 16
Room CC20, Level 2

The annual Trading Agent Competition (TAC) pits agents from research groups around the world against each other in challenging market trading domains. The 2008 tournament features a Supply Chain Management (SCM) game and a second game in the domain of market design, dubbed "CAT" (the reverse of TAC). In TAC/SCM, agents representing PC manufacturers bid for customer orders, negotiate with suppliers for components, and manage their production schedules in order to maximize profits. The 2008 TAC/SCM tournament comprises a main event for the SCM game, and two special challenge divisions focusing on specialized tasks: price forecasting and long-term procurement. In CAT, the agents represent market specialists who compete by setting rules and matching policies to attract traders and mediate profitable trades. Preliminary rounds for TAC-08 will be held during June and July, with final rounds to be held starting Monday, July 14, at the workshop on Trading Agent Design and Analysis, and continuing Tuesday and Wednesday during the main conference. More details, including game rules and the call for participation can be found at www.sics.se/tac.

Seventeenth Annual AAAI Mobile Robot Program

Monday - Wednesday, July 14 – 16, CC23, Conference Center, Second Floor

The robot program brings together academe, industry, and federal agencies to identify, discuss and demonstrate cutting edge, state of the art research in robotics and artificial intelligence. The robot events commence with two half-day workshops. The morning one, entitled "Robotics and Creativity" examines research where robots employ cognitive models and computation to display creativity. Also explored are partnerships among artists, scientists and engineers to generate a creative synergy and stimulate breakthroughs. The afternoon one, entitled "Mobility and Manipulation" studies advanced perception and cognition. These workshops include a distinguished panel of academic, industrial, and governmental roboticists to provide overviews and insights. This is then followed by forum discussions to provide additional insight and feedback.

For two days following the workshops, roboticists will exhibit their work. Such exhibits complement workshop discussions with actual demonstrations of the state of the art. Exhibits will include actual robots, interactive demonstrations, videos and posters. Technical prizes and blue ribbons will be awarded to exhibits in a number of categories.

Participants include Boeing, Canisius College, Carnegie Mellon University, Drexel University, Georgia Institute of Technology, Harvey Mudd College, Kansas State University, Massachusetts Institute of Technology, Southern Illinois University Edwardsville, Stanford University, University of Colorado at Boulder, University of Massachusetts Amherst, and Western Washington University.

General Information

ADA Devices

The staff at Hyatt Regency McCormick Place is committed to ensuring that they meet and exceed all of the requirements for the Americans with Disabilities Act. The staff is trained to accommodate guests with special needs.

Admission

Each conference attendee will receive a name badge upon registration. This badge is required for admittance to the technical, tutorial, IAAI and workshop programs. Tutorial and workshop attendees must present their attendance tickets for admittance to the rooms. Smoking, drinking and eating are not allowed in any of the technical, tutorial, workshop or IAAI sessions.

Banking

There are two ATM machines located in the Hyatt. One is located across from the Concierge Desk by the parking garage doors. The other is at the entrance to Shor Restaurant.

Lakeside Bank is located 2 blocks west of the Hyatt.

Business Center

The Hyatt's Business Center is conveniently located within the hotel on the first floor and includes on-site services such as document creation, high-speed, color copying and printing, Computer workstations, faxing, office supplies and equipment rentals as well as shipping and receiving services. Hours: Monday – Friday, 7:30 AM – 4:00 PM

A Kinko's is located in the Convention Center (hours vary). Kinko's is also located on 1242 Canal Street (312-455-0920).

A Staples is located at 1130 South Street (312-588-0924).

Career Information

A bulletin board for job opportunities in the artificial intelligence industry will be made available in the registration area. Attendees are welcome to post job descriptions of openings at their company or institution.

Housing

For information regarding hotel reservations, please contact the hotel directly. For student housing, please contact University of Illinois at Chicago at 312-355-6008.

Internet Access

Complimentary wireless internet access is available to AAAI-08 registrants in the Hyatt Regency McCormick Place Conference Center. Wireless Internet access is available in the Hyatt Regency guestrooms and hotel lobby for $9.95 per day for each location. Registration and billing can be set-up via computer.

List of Attendees

A list of preregistered attendees of the conference will be available for review at the AAAI Desk in the registration area. Attendee lists will not be distributed.

Parking

A parking garage is adjacent to the hotel on the North side with 600 spaces in a covered garage. Guests may charge valet parking to their room. Self-parking is paid to the attendant when leaving the garage.

Self Parking (NO in/out privileges)

0-1 Hour – $12.00
1-3 Hours – $16.00
3-9 Hours – $20.00
9-24 Hours – $24.00

Valet Parking: (WITH in/out privileges)

0-24 Hours – $36.00

McCormick Place Parking

31st Street Lot: $14.50 per day/no overnight parking. Located at 31st St. near Lake Shore Drive, this open-air lot holds 2,250 cars. To get to the 31st St. lot from I-55, take southbound Lake Shore Drive and exit at 31st Street. Turn right and follow the parking signs. From downtown Chicago, take Lake Shore Drive South and exit at 31st St, turn right and follow the parking signs.

Martin Luther King Lot

$14.50 per day/no overnight parking. Located across the street from the hotel, the open-air lot holds 800 cars and is handicapped-accessible to the McCormick Place complex. To get to the Martin L. King lot from I-55, exit onto Martin L. King Dr., turn left and follow the parking signs. From downtown Chicago, take Michigan Ave South to 22nd/Cermak Rd. and turn left (East). Follow the parking signs.

Printed Materials

Display tables for the distribution of promotional and informational materials of interest to conference attendees will be located in the registration area.

Proceedings CD

Each technical registrant will receive a ticket with the registration materials for one copy of the conference CD. Tickets can be redeemed in the registration area in the Prairie Center, located on the second floor of the Conference Center during registration hours. All tickets must be redeemed onsite by Thursday, July 17 at 11:00 AM. AAAI cannot mail CDs to registrants after the conference.

Hotel Restaurants

Shor

Shor, a true Chicago Grill, offers a diverse selection of both traditional and nontraditional menu items. Featuring USDA Prime aged steaks and the freshest seafood creations, in a contemporary setting. Reservations: 312-528-4140.

Hours: Breakfast 6:30–11:00 AM, Lunch 11:00 AM–3:00 PM; Dinner: 5:30–10:00 PM

Forno

Forno Italian Trattoria, offers quick, freshly made creations for a fast paced day. Designed for those needing something satisfying yet simple, Forno's menu features hearty, high quality selections, made from scratch. Choose from one of their made-to-order crisp crust pizzas, baked in the gas-fired pizza oven, to gourmet salads, sandwiches and paninni. (Forno is located just off of the main floor foyer in the Hyatt dining concourse.)

Hours: 11:00 AM–8:00 PM

Daily Grind

The Daily Grind offers fresh baked breakfast items daily, yogurt parfaits and organic juices, along with gourmet sandwiches and hot pizza from the pizza oven. And, if you have forgotten something at home, please visit the retail boutique for necessities or souvenirs. They proudly serve Starbucks Coffee.

Hours: Open daily at 6:00 AM–10:00 PM; closing hours can vary.

M/X

M/X, a chic lounge, specializes in "large spirits and small plates." Offering specialty martini's, signature cocktails and a handsome selection of wines from their very own wine room, M/X is perfect for any occasion. Their "small plates" menu features selections of various imported cheeses, olives and crusty breads from the cheese bar, along with freshly made pizzas from the gas-fired pizza oven.

Hours: 11:00 AM–12:00 midnight

Shipping

The Hyatt Business Centre located on the first floor of the hotel can assist with shipping and postal services.

Airport Transportation

Taxi

Taxis are available for pick-up outside the main lobby of the Hyatt. A ride from Hyatt Regency McCormick Place to O'Hare International Airport takes approximately 45 minutes and costs between $40–$45. A taxi ride from Hyatt Regency McCormick Place to Midway Airport costs between $20–$22.

Shuttle Service

Airport Express: 800-654-7871 or 312-454-7800
To O'Hare International Airport:
$25.00 pp (1 person). $18.00 pp (2 people). $14.00 pp (3 people. Children, 6-12 years of age, $12.00 one way, 5 years and under are free.

Airport Express to Midway Airport

$20.00 pp (1 person). $14.00 pp (2 people). $12.00 pp (3 people). Children 6-12 years of age, $12.00 one way, 5 years and under are free.

Private van service is available for up to 10 passengers for $130.00 one way. Service runs 6:00 AM–11:30 PM daily. Vans depart airport approximately every 10 minutes. Vans depart hotel at 10 after the hour and 40 after the hour beginning at 4:40 AM. The last run is at 10:10 PM. Service for physically challenged is available. Reservations are requested one day in advance for this service.

City Transportation

There is a bus stop located just outside the Hyatt in front of the main entrance for the Convention Center. The busses go downtown and to the red line stop. See www.transitchicago.com

A Metra Station is located in McCormick Place (www.metrarail.com).

Hotel Shuttle

The Hyatt shuttle runs a complimentary drop-off service (one-way only) from 11:00 AM–7:00 PM, departing each hour. Guests are asked to sign up for the 13–15 passenger shuttle at the Bell Stand of the Hyatt. The drop off locations are Museum Campus, Navy Pier, and Water Tower Plaza.

Volunteer Station

The volunteer station will be located in the onsite registration area. All volunteers are required to sign in prior to their shift, and sign out when they finish.

Disclaimer

In offering the Hyatt Regency McCormick Place, University of Illinois at Chicago, Freeman, O'Hare International Airport, Midway Airport, and all other service providers (hereinafter referred to as "Supplier(s)" for the AAAI Conference on Artificial Intelligence and the Innovative Applications Conference), AAAI acts only in the capacity of agent for the Suppliers that are the providers of the service. Because AAAI has no control over the personnel, equipment or operations of providers of accommodations or other services included as part of the AAAI-08/IAAI-08 program, AAAI assumes no responsibility for and will not be liable for any personal delay, inconveniences or other damage suffered by conference 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.

Registration

Conference registration is located in the Prairie Center on the second level of the Hyatt Regency McCormick Place Conference Center, beginning Sunday, July 13. Registration hours are:

Sunday, July 13	7:30 AM–6:00 PM
Monday, July 14	7:30 AM–6:00 PM
Tuesday, July 15	8:00 AM–5:30 PM
Wednesday, July 16	8:30 AM–5:30 PM
Thursday, July 17	8:30 AM–12:00 PM

Only checks drawn on U.S. banks, U.S. currency, VISA, MasterCard, American Express, and traveler's checks will be accepted.

Registration Fees

All fees quoted are in US dollars.

The AAAI-08/IAAI-08 technical program registration includes admission to all technical paper and poster sessions, invited talks, exhibits, demos, and competitions, the opening reception, and a copy of the AAAI-08/IAAI-08 conference proceedings on CD (the hardcopy proceedings is available at additional cost). Students must present proof of full-time student status to qualify for the student rate. Onsite technical program fees are as follows:

Technical Registration Fees

- Regular Member $790
- Regular Nonmember $980
- Student Member $305
- Student Nonmember $415

AAAI Platinum Fees

(Includes one year new or renewal membership in AAAI)

- Regular US/Canada $885
- Regular International $925
- Student US/Canada $340
- Student International $380

Tutorial Forum

Includes admittance to up to four consecutive tutorials. In addition to the fee below, all tutorial participants must register for the AAAI-08/IAAI-08 technical program.

- Regular $155
- Student $45

Workshop Program

Includes admittance to one workshop and the accompanying technical report.

Workshop with technical program

- Regular $175 ($265 for 2-day)
- Student $155 ($235 for 2-day)

Workshop Only (no technical program)

- Regular $315 ($390 for 2-day)
- Student $205 ($280 for 2-day)

Opening Reception (Monday, July 14)

- Adult Guest $35.00
- Child $10.00

Poster/Demo Reception (Wednesday, July 16)

- Adult Guest $50.00
- Child $15.00

Hyatt Regency

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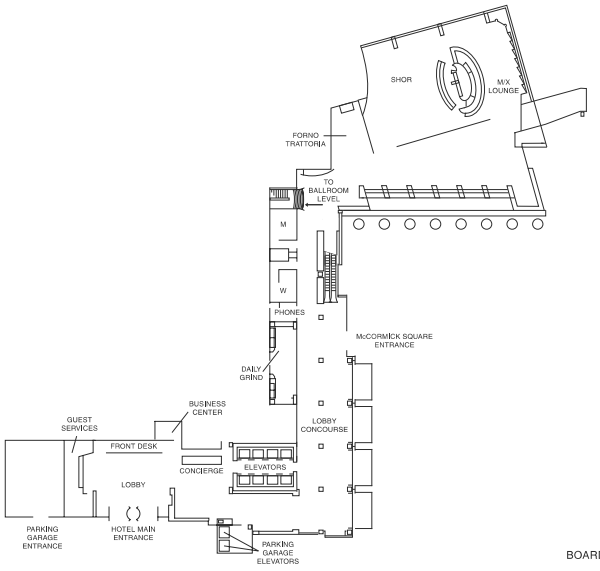

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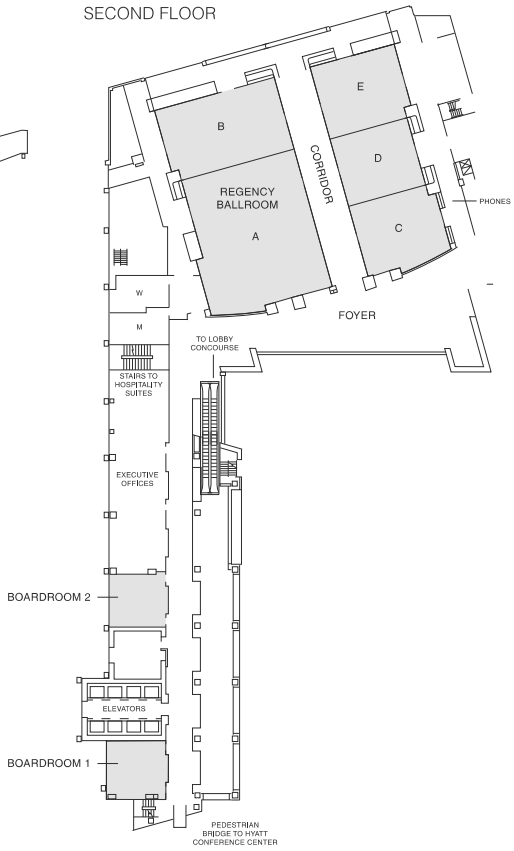

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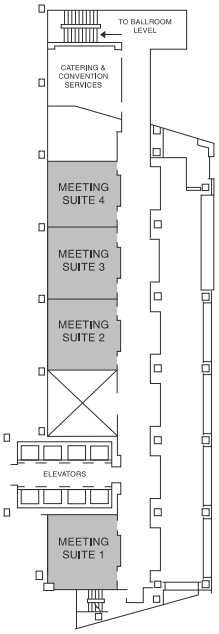

Conference Center

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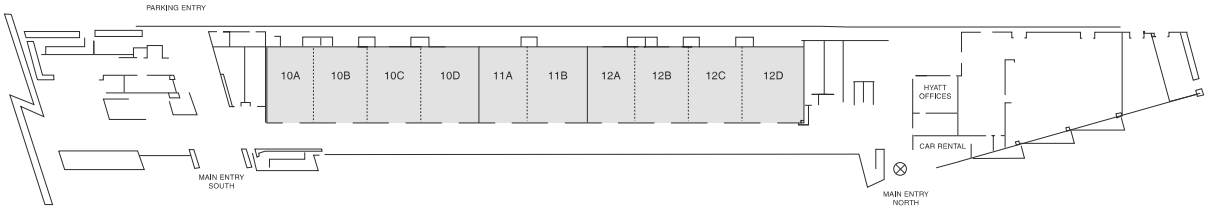

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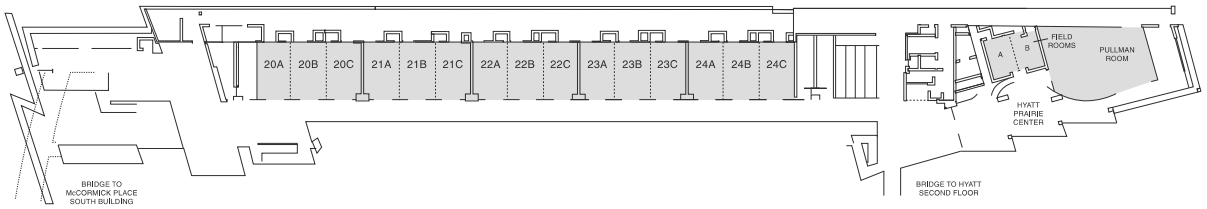

AI Magazine Poster: The AI Landscape

We are pleased to present every technical registrant with a copy of the *AI Magazine* poster, The AI Landscape. The following text explains the genesis of the poster, and acknowledges those who were instrumental in its creation. A second edition of the poster, printed flat on higher-quality paper, is planned for the fall. For further information, see the rapidly evolving poster web page (www.aaai.org/AILandscape).

AI's first half-century produced great accomplishments, but many of the field's successes have remained unsung beyond the AI community. AI's integration into the fabric of everyday life has had tremendous impact, but the public may not recognize its many roles or understand its fundamental goals. In response, *AI Magazine* has developed a poster to help educate students, faculty, and the public about AI and to spur them to find out more about the field.

The poster's design was based on input from experts on how to convey key aspects of AI and to capture the imagination of a broad audience. The design does not attempt the impossible feat of summarizing all of AI—or even a substantial part—in a single poster. Nor does it present a list of new advances, which would soon become obsolete. Instead, it presents a snapshot of a few aspects of AI selected to catalyze interest and to prompt viewers to find out more by exploring AAAI web resources. The resulting poster, The AI Landscape, provides a glimpse of AI's multifaceted role in service of society, an illustration of the types of questions being addressed by the field, and a pointer to web resources including a timeline tracing the field's history.

I would like to thank the many people and organizations that played a vital role in the poster project. Only a few are highlighted here. First, I am deeply grateful for the vision and support of Edwina Rissland and Douglas Fisher of the National Science Foundation. Poster content benefited from tremendous contributions from the Poster Development Committee, the *AI Magazine* Editorial Board, the AAAI Publications Committee, the AAAI Executive Council, and others who generously supplied their ideas, as well as from the assistance of Harold Cohen, who kindly agreed to allow the inclusion of images of two paintings from the program Aaron. Given the poster's size, artistic constraints, and diversity of perspectives, not all suggestions could be included in the final design, but all were greatly appreciated. I also thank AAAI, the National Science Foundation, Microsoft Research, and Yahoo! Research for their generous support. Full acknowledgments are included at the poster web site, www.aaai.org/AILandscape.php.

I would also like to thank Carol Hamilton and the AAAI staff for their support of the poster project, especially Mike Hamilton, whose many contributions played a key role throughout.

The poster was designed by James Gary, of Brooklyn, New York. The project owes him an enormous debt for his vision, creativity, craftsmanship, and tireless work to produce the compelling design.

May you find this poster a wonderful way to spread the word about AI!

– *David Leake* (Poster Development Committee Chair and Editor in Chief, *AI Magazine*).

Acknowledgment

This material is based upon work supported by the National Science Foundation under Grant No. IIS-0646959. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation or other sponsors.

Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence

July, 2008
Chicago, Illinois USA

3 vols., references, index, illus.,

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