AAAII-10 / IAAI-10
Conference Program

Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10)

Twenty-Second Conference on Innovative Applications of Artificial Intelligence (IAAI-10)

July 11 – 15, 2010
Westin Peachtree Plaza
Atlanta, Georgia, USA

Sponsored by the
Association for the Advancement of Artificial Intelligence

Cosponsored by the National Science Foundation, Microsoft Research, Google, Inc., Cornell University Institute for Computational Sustainability, Naval Research Laboratory, Yahoo! Research Labs, iRobot, NASA Ames Research Center, University of Southern California/Information Sciences Institute, IBM Research, Intel, Educational Affairs Group, Computer Science Department, Stanford University, David E. Smith, and ACM/SIGART
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-Fourth AAAI Conference on Artificial Intelligence and the Twenty-Second Conference on Innovative Applications of Artificial Intelligence.

AAAI Conference Committee Chair
Dieter Fox (University of Washington, USA)

AAAI-10 Program Chairs
Maria Fox (University of Strathclyde, UK)
David Poole (University of British Columbia, Canada)

IAAI-10 Conference Chair and Cochair
Nestor Rychtyckyj (Ford Motor Company, USA)
Daniel Shapiro (ISLE, USA)

Symposium on Educational Advances in Artificial Intelligence Chair
Mehran Sahami (Stanford University, USA)

Special Track on Artificial Intelligence and the Web Cochairs
Subbarao Kambhampati (Arizona State University, USA)
Lora Aroyo (Free University of Amsterdam, The Netherlands)

Special Track on Artificial Intelligence and Bioinformatics Cochairs
Pierre Baldi (University of California, Irvine, USA)
Paolo Fraconsi (Università degli Studi di Firenze, Italy)

Special Track on Challenges in AI Cochairs
Daniel S. Weld (University of Washington, USA)
David E. Smith (NASA Ames Research Center, USA)

Special Track on Integrated Intelligence Cochairs
Pat Langley (Arizona State University, USA)
Alan Schultz (Naval Research Laboratory, USA)

Special Track on Physically Grounded Artificial Intelligence Cochairs
J. Andrew Bagnell (Carnegie Mellon University, USA)
Marlai Hebert (Carnegie Mellon University, USA)
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Nectar Program Cochairs
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Tutorial Program Cochair
Russell Greiner (University of Alberta, Canada)

Workshop Program Cochair
Michael Beetz (Technische Universität München, Germany)
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Doctoral Consortium Cochairs
Chris Brooks, (University of San Francisco, USA)
Brad Clement (Jet Propulsion Laboratory, USA)

Student Abstract and Poster Cochair
Nestor Rychtyckyj and Cochair Daniel Shapiro.

General Game Playing Competition Chair
Michael Genesereth (Stanford University, USA)

Poker Competition Chair
Nolan Bard (University of Alberta, Canada)

AAAI-10 Awards
The AAAI-10 Awards will be announced by the IAAI-10 Conference Committee members appears in the conference proceedings.

Awards
All AAAI-10, IAAI-10, and AAAI Special Awards will be presented Tuesday, July 13, 8:30 – 9:00 AM, in the Peachtree Ballroom on the Eighth Floor of the Westin.

IAAI-10 Awards
The IAAI-10 Awards will be presented by Program Cochairs Maria Fox and David Poole.

AAAI-10 Outstanding Paper Awards
A Novel Transition Based Encoding Scheme for Planning as Satisfiability
Ruoyun Huang, Yixin Chen, and Weixiong Zhang (Washington University in St. Louis)

How Incomplete is your Semantic Web Reasoner? Systematic Analysis of the Completeness of Query Answering Systems
Giorgos Stilos, Bernardo Cuenca Grau, and Ian Horrocks (Oxford University)

IAAI-10 Outstanding Senior Program Committee Member Award
Jerome Lang (IRIT, Université Paul Sabatier, France)

AAAI-10 Outstanding Program Committee Member Award
Chris Beck (University of Toronto, Canada)

IAAI-10 Deployed Applications Awards
The four IAAI-10 Deployed Application Awards will be announced by the IAAI-10 Chair Nestor Rychtyckyj and Cochair Daniel Shapiro. 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-10 and AI Magazine, and will be presented by Nestor Rychtyckyj and Daniel Shapiro, IAAI-10 Chair and Cochair.
and David B. Leake, Editor-in-Chief, AI Magazine. 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 2010 award will be presented to Jay M. Tenenbaum (CollabRx Inc.) for pioneering artificial intelligence contributions with extensive applications impact, including seminal work in computer vision and manufacturing along with a visionary role in the birth of electronic commerce. The lecture will be held Tuesday, July 13, 10:20 AM, in the Atlanta Ballroom H on the Seventh Floor of the Westin.

**AAAI Special Awards**

The AAAI Special Awards will be presented by Eric Horvitz, Awards Committee Chair and AAAI Past President, and Henry Kautz, AAAI President.

**Classic Paper Award**

The 2010 AAAI Classic Paper award honors the authors of the paper(s) deemed most influential from the Ninth National Conference on Artificial Intelligence, held in 1991 in Anaheim, California.

**Distinguished Service Award**

The AAAI Distinguished Service award recognizes one individual each year for extraordinary service to the AI community. The 2010 recipient is Alan K. Mackworth, professor of computer science and Canada Research Chair in Artificial Intelligence at the University of British Columbia, for his outstanding service to AI, including seminal scientific contributions in constraint-based representations and methods, with pioneering efforts in machine vision, robotics, and situated agents, and his sustained service in numerous key leadership roles, including the presidencies of AAAI, IJCAI, and the Canadian Society for Computational Studies of Intelligence, amidst a lifetime of catalyzing and promoting AI research.

**IJCAI-JAIR Best Paper Prize**

The IJCAI-JAIR Best Paper Prize, which will be presented by Adnan Darwiche, 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:

SATzilla: Portfolio-based Algorithm Selection for SAT
JAIR 32, 563–606

Honorable Mention:
Knowledge Derived from Wikipedia for Computing Semantic Relatedness
JAIR 30, 181-212

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**Keynote Address**

**Leslie Pack Kaelbling**
(Massachusetts Institute of Technology)
Tuesday, July 13, 9:00 – 10:00 AM
Peachtree Ballroom, Eighth Floor

Since the inception of the field, one of the visions of artificial intelligence has been robust, intelligent, general-purpose robots that interact with the real world. We have made useful progress in that direction, but there is still a long way to go. Kaelbling will characterize one view of how we might achieve this goal, describe some intermediate results, and characterize important technical and methodological problems that must be solved to make that vision real.

Leslie Pack Kaelbling is the Ellen Swallow Richards Professor of Computer Science and Engineering at the Computer Science and Artificial Intelligence Laboratory (CSAIL) at the Massachusetts Institute of Technology. She has made research contributions to decision-making under uncertainty, learning, and sensing with applications to robotics, with a particular focus on reinforcement learning and planning in partially observable domains. She holds an A.B. in philosophy and a Ph.D. in computer science from Stanford University, and has previously held positions at SRI International, Teleos Research, and Brown University. She is the recipient of the US NSF Presidential Faculty Fellowship, the IJCAI Computers and Thought Award, and several teaching prizes, and is a fellow of the AAAI. She was the founder and editor-in-chief of the Journal of Machine Learning Research.

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**Social Events**

**Opening Reception**

The AAAI-10 Opening Reception will be held Monday, July 12, 6:00 – 7:00 PM in the Peachtree Ballroom of the Westin Peachtree Plaza. 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. Admission to the reception is free to AAAI-10 technical registrants. A $50.00 per person fee ($25.00 for children) will be charged for spouses and other nontechnical conference registrants.

**AAAI-10 Poster Session**

A conference-wide poster session will be held on Wednesday, July 14, 6:30 – 9:30 PM in the Peachtree Ballroom of the Westin and will feature exemplary AAAI-10 Technical Program posters, Student Abstracts, Doctoral Consortium Abstracts, Educational Advances in AI Symposium posters, and Poker Competition posters. (For a complete listing of posters, please refer to page 17.) The accompanying reception will include a light dinner buffet and a no-host bar. Admission to the reception is free to AAAI-10 registrants. A $50.00 per person fee ($25.00 for children) will be charged for spouses and other nontechnical conference registrants.
**Workshop Program**

Registration for a workshop requires a supplemental fee for AAAI-10 technical registrants. Individuals who do not wish to participate in any other AAAI-10 programs or events may elect the workshop only registration fee.

**Sunday, July 11**

**W1: AI and Fun**

Organizers: Mark Riedl, Vadim Bulitko, Charles Isbell, and Ashwin Ram
Tower Room 1201, Eighth Floor 8:45 AM – 6:00 PM

**W2: Bridging the Gap between Task and Motion Planning**

Organizers: Maxim Likachev, Bhaskara Marthi, Conor McGann, and David Smith
Tower Room 1202, Eighth Floor 9:00 AM – 5:30 PM

**W3: Collaboratively-Built Knowledge Sources and Artificial Intelligence**

Organizers: Vivi Nastase, Roberto Navigli, and Fei Wu
Tower Room 1203, Eighth Floor 9:00 AM – 6:00 PM

**W4: Goal-Directed Autonomy**

Organizers: David Aha, Matthew Klenk, Hector Munoz-Avila, Ashwin Ram, and Daniel Shapiro
Tower Room 1201, Eighth Floor 9:00 AM – 6:00 PM

**W5: Intelligent Security**

Organizers: Mark Boddy, Stefan Edelkamp, and Robert P. Goldman
Tower Room 1202, Eighth Floor 9:00 AM – 6:00 PM

**W6: Interactive Decision Theory and Game Theory**

Organizers: Piotr Gmytrasiewicz, Prashant Doshi, and Karl Tuyls
Tower Room 1203, Eighth Floor 8:50 AM – 5:15 PM

**W7: Metacognition for Robust Social Systems**

Organizers: Anita Raja and Darsana Josyula
Tower Room 1204, Eighth Floor 9:00 AM – 5:10 PM

**W8: Model Checking and Artificial Intelligence**

Organizers: Ron van der Meyden and Jan-Georg Smaus
Tower Room 1205, Eighth Floor 9:00 AM – 6:30 PM

**W9: Neural-Symbolic Learning and Reasoning**

Organizers: Artur d’Avila Garcez, Pascal Hitzler, and Luis Lamb
Tower Room 1206, Eighth Floor 9:00 AM – 6:00 PM

**W10: PAIR: Plan, Activity, and Intent Recognition 2010**

Organizers: Christopher Geib, David Pynadath, Hung Bui, and Gita Sukthankar
Tower Room 1204, Eighth Floor 9:00 AM – 6:00 PM

**W11: Statistical Relational AI**

Atlanta Ballroom A, Seventh Floor 8:45 AM – 6:00 PM

**W12: Visual Representations and Reasoning**

Organizers: Keith McGeogg and Maithilee Kunda
Tower Room 1207, Eighth Floor 9:00 AM – 5:30 PM

**W13: Workshop on Abstraction, Reformulation, and Approximation**

Organizers: Gregory Provan and Ashish Sabharwal
Tower Room 1205, Eighth Floor 9:00 AM – 5:15 PM

**Monday, July 12**

**W14: Planning and Optimization**

Organizers: Mark Boddy, Stefan Edelkamp, and Robert P. Goldman
Tower Room 1202, Eighth Floor 9:00 AM – 6:00 PM

**W15: Social Systems**

Organizers: Maxim Likachev, Bhaskara Marthi, Conor McGann, and David Smith
Tower Room 1203, Eighth Floor 9:00 AM – 6:00 PM

**W16: Task and Motion Planning**

Organizers: Maxim Likachev, Bhaskara Marthi, Conor McGann, and David Smith
Tower Room 1204, Eighth Floor 9:00 AM – 6:00 PM

**W17: Metacognition for Robust Social Systems**

Organizers: Anita Raja and Darsana Josyula
Tower Room 1205, Eighth Floor 9:00 AM – 6:30 PM

**W18: Model Checking and Artificial Intelligence**

Organizers: Ron van der Meyden and Jan-Georg Smaus
Tower Room 1206, Eighth Floor 9:00 AM – 6:00 PM

**W19: Neural-Symbolic Learning and Reasoning**

Organizers: Artur d’Avila Garcez, Pascal Hitzler, and Luis Lamb
Tower Room 1207, Eighth Floor 9:00 AM – 5:30 PM

**W20: Interactive Decision Theory and Game Theory**

Organizers: Piotr Gmytrasiewicz, Prashant Doshi, and Karl Tuyls
Tower Room 1208, Eighth Floor 8:50 AM – 5:15 PM

**W21: PAIR: Plan, Activity, and Intent Recognition 2010**

Organizers: Christopher Geib, David Pynadath, Hung Bui, and Gita Sukthankar
Tower Room 1209, Eighth Floor 9:00 AM – 6:00 PM

**W22: Visual Representations and Reasoning**

Organizers: Keith McGeogg and Maithilee Kunda
Tower Room 1210, Eighth Floor 9:00 AM – 5:30 PM

**W23: Workshop on Abstraction, Reformulation, and Approximation**

Organizers: Gregory Provan and Ashish Sabharwal
Tower Room 1211, Eighth Floor 9:00 AM – 5:15 PM

**W24: Social Systems**

Organizers: Maxim Likachev, Bhaskara Marthi, Conor McGann, and David Smith
Tower Room 1212, Eighth Floor 9:00 AM – 6:00 PM

**W25: Task and Motion Planning**

Organizers: Maxim Likachev, Bhaskara Marthi, Conor McGann, and David Smith
Tower Room 1213, Eighth Floor 9:00 AM – 6:00 PM

**W26: Metacognition for Robust Social Systems**

Organizers: Anita Raja and Darsana Josyula
Tower Room 1214, Eighth Floor 9:00 AM – 6:30 PM

**W27: Model Checking and Artificial Intelligence**

Organizers: Ron van der Meyden and Jan-Georg Smaus
Tower Room 1215, Eighth Floor 9:00 AM – 6:00 PM

**W28: Neural-Symbolic Learning and Reasoning**

Organizers: Artur d’Avila Garcez, Pascal Hitzler, and Luis Lamb
Tower Room 1216, Eighth Floor 9:00 AM – 6:00 PM

**W29: Interactive Decision Theory and Game Theory**

Organizers: Piotr Gmytrasiewicz, Prashant Doshi, and Karl Tuyls
Tower Room 1217, Eighth Floor 8:50 AM – 5:15 PM

**W30: PAIR: Plan, Activity, and Intent Recognition 2010**

Organizers: Christopher Geib, David Pynadath, Hung Bui, and Gita Sukthankar
Tower Room 1218, Eighth Floor 9:00 AM – 6:00 PM

**W31: Visual Representations and Reasoning**

Organizers: Keith McGeogg and Maithilee Kunda
Tower Room 1219, Eighth Floor 9:00 AM – 5:30 PM

**W32: Workshop on Abstraction, Reformulation, and Approximation**

Organizers: Gregory Provan and Ashish Sabharwal
Tower Room 1220, Eighth Floor 9:00 AM – 5:15 PM

**Postworkshop Technical Reports**

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

**Student Programs**

**AAAI-10 Student Only Reception**

The USC/Information Sciences Institute will host the fourth annual AAAI Student Only Reception, Tuesday, July 13 from 5:45-6:45 PM in International Rooms F/G/H on the sixth floor of the Westin Peachtree Plaza. Snacks and beverages will be served. All AAAI-10 registered students are welcome.

**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 Overlook on the seventh floor of the Westin on their assigned day.

**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 2010, who will be honored during the annual Fellows dinner on Tuesday, July 13:

- Pedro Domingos (University of Washington)
- Nicholas R. Jennings (University of Southampton)
- Michael L. Littman (Rutgers University)
- Christopher D. Manning (Stanford University)
- Bernhard Nebel (Albert-Ludwigs-Universitaet Freiburg)
- Yoram Singer (Google)
- Padhraic Smyth (University of California, Irvine)
- Moshe Tennenholz (Technion – Israel Institute of Technology)

For information about the special competition awards, please see the section on AAAI-10 Competitions elsewhere in this program.
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Invited Talks

Tuesday, July 13
9:00 – 10:00 AM
AAAI Keynote Address
Intelligent Interaction with the Real World
Leslie Pack Kaelbling (Massachusetts Institute of Technology)
Peachtree Ballroom, Eighth Floor (see description on page 3)

10:20 – 11:20 AM
IAAI-10 Invited Talk: Robert S. Engelmore Memorial Award Lecture
Cancer: A Computational Disease that AI Can Cure
Jay M. Tenenbaum (CollabRx Inc.)
Atlanta Ballroom H, Seventh Floor
See description, page 7.

1:50 – 2:50 PM
AAAI-10 Invited Talk
Systems with General Intelligence: A New Perspective
Michael Thielscher (The University of New South Wales)
Peachtree Ballroom, Eighth Floor

Wednesday, July 14
9:00 – 10:00 AM
AAAI-10 Invited Talk
Challenges for AI in Computational Sustainability
Carla P. Gomes (Cornell University)
Peachtree Ballroom, Eighth Floor

Computational sustainability is a new interdisciplinary research field with the overall goal of developing computational models, methods, and tools to help manage the balance between environmental, economic, and societal needs for a sustainable future. In this talk I will provide an overview of computational sustainability, with examples ranging from wildlife conservation and biodiversity, to poverty mitigation, to large-scale deployment and management of renewable energy sources. I will highlight overarching computational challenges for AI at the intersection of constraint reasoning, optimization, machine learning, and dynamical systems. Finally I will discuss the need for a new approach that views computational sustainability problems as “natural” phenomena, amenable to a scientific methodology, in which principled experimentation, to explore problem parameter spaces and hidden problem structure, plays as prominent a role as formal analysis.

10:20 – 11:20 AM
AAAI-10 Invited Talk
A New Paradigm of Geriatric Care Empowered by Applied AI
Majd Alwan (Center for Aging Services Technologies)
Atlanta Ballroom H, Seventh Floor
Advances in sensor, communication, AI technologies and data processing, coupled with the increasing processing power, is causing a shift in the way we care for the elderly. Alwan presents a new paradigm for geriatric care based on monitoring and assisting older adults in their own living settings.

Thursday, July 15
9:00 – 10:00 AM
AAAI-10 Invited Talk
Incentive Engineering in the Internet Age
David C. Parkes (Harvard University)
Peachtree Ballroom, Eighth Floor

Mechanism design provides a formalism within which to understand the possible and the impossible when designing multi-agent systems with private information and rational agents. In introducing computational considerations, we have gained some understanding of how to reconcile new tensions that arise. Today, we see a thirst for practical, engineered incentive mechanisms to deploy across the myriad of multiuser systems enabled by the Internet. I will highlight some of the new challenges that this presents, in moving from isolated events to continual processes, from simple models to complex, multifaceted agent models, and in enabling new kinds of computational and coordination processes.

Constraint Programming and Artificial Intelligence: Challenges, Applications and Opportunities
Barry O’Sullivan (University College Cork)
Peachtree Ballroom, Eighth Floor

Constraint programming is a powerful tool for modeling and solving complex optimization problems. It is widely used to support industrial decision-making, as well as being used as a component in various intelligent systems. Constraint programming has its origins in constraint satisfaction and logic programming from the field of artificial intelligence, and mathematical programming from the field of operations research. In this talk I will: identify some of the challenges facing the field; present some exciting applications of constraint programming; and give a view of where opportunities lie for the future from the perspectives of both science and application.

1:50 – 2:50 PM
AAAI-10 Invited Talk
Species of Mind
Vernor Vinge (San Diego State University)
Atlanta Ballroom H, Seventh Floor

More than any other animal, we humans invent ways to outsource cognitive function. We’ve been doing this for a long time. For instance, writing is an outsourcing of memory; money is a scalar that allows the comparison of vastly different objects. During the last century, the outsourcing process has become more diverse and intense. The range of our recent activities is leading toward a number of different kinds of superhuman intelligence. In this presentation, I’ll discuss several different paths to superintelligence, their relative power, the transformations they might create, and how humans might deal with them.
Cancer results from finite genomic mutations that biotechnology can easily list, and that we can mostly understand and reason about in terms of the underlying biochemistry. Tragically, the scientific and medical communities are searching for cures using an incredibly inefficient non-adaptive strategy, where the costs of experiments are measured in lives, as well as money, and where we capture only a small portion of the genomics and outcomes data, i.e., in clinical trials. Inspired by my career experiences as an AI researcher, Internet entrepreneur and cancer survivor, I am attempting to redress this situation through Cancer Commons, a “rapid learning” community of patients, physicians and researchers. Our goal is to cure cancer by collecting the genomic and response data from thousands of adaptively-planned individual treatment experiments, integrating the resulting sparse fragments of evidence to infer the true causal mechanisms of tumors and drugs, and generalizing the resulting knowledge so that it can be applied to new cases. Each patient is treated in accord with the best available knowledge, and that knowledge is continually updated to benefit the next patient. Hopefully, this adaptive approach will efficiently climb the hill to find cures for cancer, one patient at a time.
Special Meetings

AAAI Business Meeting
The AAAI Annual Business Meeting will be held Monday, July 12, 12:45 – 1:15 PM, Atlanta H, Seventh Level, Westin Peachtree Plaza.

AAAI Conference Committee Meeting
AAAI Conference Committee Meeting will be held Thursday, July 15, 7:45 – 8:45 AM, Roswell II, Eighth Floor, Westin Peachtree Plaza.

AAAI Executive Council Meeting
The AAAI Executive Council Meeting will be held Monday, July 12, 9:00 AM – 4:00 PM, Roswell I, Eighth Floor, Westin Peachtree Plaza. Continental breakfast will be available at 8:30 AM.

AAAI Publications Committee Meeting
The AAAI Publications Committee Meeting will be held Wednesday, July 14, 7:45 – 8:45 AM, Roswell II, Eighth Floor, Westin Peachtree Plaza.

AI Journal Editorial Board Meeting
The AI Journal Editorial Board Meeting will be held Tuesday, July 13, 12:30 – 2:00 PM, International A, Sixth Floor, Westin Peachtree Plaza.

AI Magazine Editorial Board Meeting
The AI Magazine Editorial Board Meeting will be held Wednesday, July 14, 12:30 – 2:00 PM, Roswell II, Eighth Floor, Westin Peachtree Plaza.

Doctoral Consortium Schedule

Sunday, July 11
9:00 – 9:20 AM
Welcome

9:20 – 10:00 AM
Nonparametric Bayesian Approaches for Reinforcement Learning in Partially Observable Domains
Finale Doshi-Velez (Mentor: Sven Koenig)

10:00 – 10:40 AM
Integrating Reinforcement Learning into a Programming Language
Christopher L. Simpkins (Mentor: Sven Koenig)

10:40 – 11:10 AM
Break

11:10 – 11:50 AM
Integrating Expert Knowledge and Experience
Ben Weber (Mentor: David Aha)

11:50 AM – 12:30 PM
Multi-Agent Fault Tolerance Inspired by a Computational Analysis of Cancer
Megan Olsen (Mentor: Elizabeth Sklar)

12:30 – 1:15 PM
Lunch

1:15 – 2:15 PM
Presentation: How To Develop A Research Program

2:15 – 2:55 PM
Interactive Task-Plan Learning
Shuonan Dong (Mentor: Marie desJardins)

2:55 – 3:35 PM
Preferences and Learning in Multi-Agent Negotiation
Reyhan Aydogan (Mentor: Gita Sukthankar)

3:35 – 4:05 PM
Break

4:05 – 4:45 PM
On Multi-Robot Area Coverage
Pooyan Fazli (Mentor: Maria Gini)

4:45 – 5:25 PM
Towards a Robust Deep Language Understanding System
Mehdi Manshadi (Mentor: Ray Mooney)

7:00 PM
Dinner

Monday, July 12
9:00 – 9:20 AM
Welcome

9:20 – 10:00 AM
Continual On-Line Planning
Sofia Lemons (Mentor: Dragos Margineantu)

10:00 – 10:40 AM
Enhancing Affective Communication in Embodied Conversational Agents
Michelle Leonard (Mentor: Stephanie August)

10:40 – 11:10 AM
Break

11:10 – 11:50 AM
Hierarchical Skill Learning for High-Level Planning
James MacGlashan (Mentor: Brad Clement)

11:50 AM – 12:30 PM
Local Optimization for Simulation of Natural Motion
Tom Erez (Mentor: Doina Precup)

12:30 – 1:15 PM
Lunch

1:15 – 2:15 PM
Panel

2:15 – 2:45 PM
Computational Social Choice: Strategic and Combinatorial Aspects
Lirong Xia (Mentor: Maria Gini)

2:45 – 3:25 PM
Detecting Social Ties and Copying Events from Affiliation Data
Lisa Friedland (Mentor: Kiri Wagstaff)

3:25 – 4:05 PM
Hierarchical Skill Learning for High-Level Planning
James MacGlashan (Mentor: Brad Clement)

4:05 – 4:30 PM
Wrap-up
New for 2010, EAAI-10 provides a venue for researchers and educators to discuss pedagogical issues and share resources related to teaching AI and using AI in education across a variety of curricular levels (K-12 through postgraduate training), with a natural emphasis on undergraduate and graduate teaching and learning. The symposium will explore how to more effectively teach AI, as well as how themes from AI may be used to enhance education more broadly. EAAI-10 features a technical program, a poster program as part of the conference-wide poster session on Wednesday evening, and a “Model AI” session highlighting innovative, ready-to-adopt materials. A post-symposium workshop for mentoring new faculty, instructors, and graduate students on teaching will be held on Wednesday, July 14. Finally, a Student/Educator Track will be included in the AAAI-10 Robotics Exhibition and Workshop. EAAI-10 is included in the AAAI-10 technical registration fee.

EAAI Schedule

The Symposium on Educational Advances in AI (EAAI-10) will be held in Augusta Room I/II, Seventh Floor

July 13, 2010

10:20 – 11:20 AM
Welcome and Invited Talk
Welcome
Mehran Sahami, EAAI-10 Chair
EAAI-10 Invited Talk: Technology for Teaching the Rest of Us
Mark Guzdial (Georgia Institute of Technology)

11:30 AM – 12:30 PM
Paper Session I: Teaching AI
Teaching Introductory Artificial Intelligence with Pac-Man
John DeNero, Dan Klein (UC Berkeley)

A Course-Long Information Retrieval Project
David Kauchak (Pomona College)

An Action Research Report from a Multi-Year Approach to Teaching Artificial Intelligence at the K-6 Level
Clint Heintze (Defence Science and Technology Organisation), Janet Haase, Helen Higgins (Manchester Primary School)

1:50 – 2:50 PM
Paper Session II: Using Robots in Education
Leveraging Mixed Reality Infrastructure for Robotics and Applied AI Instruction
Inchy Balas, John Anderson (University of Manitoba)

Designing the Finch: Creating a Robot Aligned to Computer Science Concepts
Tom Lawers, Ilkka Nurminskii (Carnegie Mellon University)

The Tekkotsu "Crew": Teaching Robot Programming at a Higher Level
David S. Touretzky, Ethan J. Tira-Thompson (Carnegie Mellon University)

3:00 – 4:00 PM
Model AI Assignments Session I: Teaching AI with Games
The Pac-Man Projects Software Package for Introductory Artificial Intelligence
John DeNero, Dan Klein (University of California, Berkeley)

A Project on Any-Angle Path-Planning for Computer Games for "Introduction to Artificial Intelligence" Classes
Sven Koenig, Kenny Daniel, Alex Nash (University of Southern California)

A Project on Fast Trajectory Replanning for Computer Games for "Introduction to Artificial Intelligence" Classes
Sven Koenig, William Youh (University of Southern California)

A Project on Gesture Recognition with Neural Networks for "Introduction to Artificial Intelligence" Classes
Xiaoming Zheng, Sven Koenig (University of Southern California)

4:20 – 5:20 PM
Model AI Assignments Session II: Teaching Topics in AI
Getting Set with OpenCV
Zachary Dodds (Harvey Mudd College)

Assignment on CSPs for First Undergraduate AI Course
Giuseppe Carenini, David Poole, CPSC322 Team (University of British Columbia)

July 14, 2010

10:20 AM – 11:20 AM
EAAI-10 Teaching and Mentoring Workshop
Creating Classroom Engagement
Small groups discuss ideas for how to teach specific AI topics in engaging ways (for example, demos, interactive activities, case studies, student-led sessions, and so on)

11:30 AM – 12:30 PM
EAAI-10 Teaching and Mentoring Workshop
Handling Teaching Challenges
Panel discussion on difficult teaching issues (e.g., academic integrity/cheating, balancing teaching with other obligations, classroom management, etc.). Share your challenging moments and discuss ideas for solutions.

Rook Jumping Maze Generation
Todd Neller (Gettysburg College)

An Introduction to Genetic Algorithms
Christopher Brooks (University of San Francisco)

Poster Spotlights
A Simulator for Teaching Robotics Programming using the iRobot Create
Andrew Hettlinger, Matthew R. Boutell (Rose-Hulman Institute of Technology)

Teaching Artificial Intelligence and Robotics via Games
Daniel Wong, Ryan Zink, Sven Koenig (University of Southern California)

(The EAAI poster session is part of the main AAAI poster session on Wednesday, July 14th from 6:30 PM-9:30 PM.)
## AAAI-10/IAAI-10 Opening Ceremony

8:30 – 9:00 AM

**Welcome and Opening Remarks**

All events in this time slot will be held in the Peachtree Ballroom, 8th Floor

### Dimensionality Reduction 1

- **Two-Stage Sparse Representation for Robust Recognition on Large-Scale Database**
  - Ran He, BaoChang Hu, Wei-shi Zheng, Yan-Qing Guo
- **Discriminant Laplacian Embedding**
  - Hua Wang, Heng Huang, Chris Ding
- **Gaussian Process Latent Random Field**
  - Gaoqiang Zhang, Wu-Jun Li, Dih-Yan Yeung, Xinneng Hou, Cheng-Lin Liu

### Search 1

- **EWLS: A New Local Search for Minimum Vertex Cover**
  - Shuaiwei Cai, Kaile Su, Qinglun Chen
- **Optimal Rectangle Packing on Non-Square Benchmarks**
  - Eric Huang, Richard E. Korf
- **I 6-Bit Pattern Databases**
  - Teresa M. Breyer, Richard E. Korf

### Game Playing

- **Symmetry Detection in General Game Playing**
  - Stephan Schiffel
- **A General Game Description Language for Incomplete Information Games**
  - Michael Thielscher
- **Learning Simulation Control in General Game-Playing Agents**
  - Hilmar Finnsson, Yngv Inbjornsson

### Auctions 1

- **Challenges in AI: Hidden Market Design**
  - Swen Seiden, Kamal Jain, David C. Parkes
- **Envy Quotes and the Iterated Core-Selecting Combinatorial Auction**
  - Abraham Othman, Tuomas Sandholm
- **Dynamic Auction: A Tractable Auction Procedure**
  - Dongmo Zhang, Wei Huang, Laurent Perrussel

### Dimensionality Reduction 2

- **Conformal Mapping by Computational-ly Efficient Methods**
  - Stefan Pintilie, Ali Ghodsi
- **Non-I.I.D. Multi-Instance Dimensionality Reduction by Learning a Maximum Margin Subspace**
  - Wei Ping, Ye Xu, Kexin Ren, Chi-Hang Chu, Farsad Sherkati
- **Multi-Instance Dimensionality Reduction**
  - Yu-Yin Sun, Michael K. Ng, Zhi-Hua Zhou

### Search 2

- **Using Lookaheadss with Optimal Best-First Search**
  - Remi Stern, Tamar Kalusins, Ariel Felner, Robert Holte
- **Understanding the Success of Perfect Information Monte Carlo Sampling in Game Tree Search**
  - Jeffrey Long, Nathan R. Sturtevant, Michael Buro, Timothy Tartakovsky
- **Parallel Depth First Proof Number Search**
  - Tomoyuki Kaneko

### Coalitional Games

- **Challenges in AI: Collusion Detection in Online Bridge**
  - Jeff Yan
- **Approximate Coalition Structure Generation**
  - Travis C. Service, Julie A. Adams
- **Transferable Utility Planning Games**
  - Ronen I. Brafman, Carmel Domshlak, Yagil Engel, Moshe Tennenholtz

### Auctions 2

- **Automated Channel Abstraction for Advertising Auctions**
  - William J. Walsh, Craig Boutilier, Tuomas Sandholm, Rob Shields, George Nemhauser, David C. Parkes
- **Stability and Incentive Compatibility in a Kernel-Based Combinatorial Auction**
  - Sebastian Lahme
- **Asymmetric Spite in Auctions**
  - Ankit Sharma, Tuomas Sandholm

### Dimensionality Reduction 3

- **Non-Metric Locality-Sensitive Hashing**
  - Yadong Mu, Shuicheng Yan
- **Non-Negative Matrix Factorization with Constraints**
  - Haifeng Liu, Zhaoxuan Lu
- **Nonnegative Matrix Factorization Clustering on Multiple Manifolds**
  - Bin Shen, Luo Si

### Search 3

- **Searching without a Heuristic: Efficient Use of Abstraction**
  - Bradford Larsen, Ethan Burn, Wheeler Rumel, Robert C. Holte
- **Search Space Reduction Using Swap Hierarchies**
  - Nir Pochter, Ayel Zohar, Jeffrey S. Rosenschein, Ariel Felner
- **Symmetry within Solutions**
  - Martin Heule, Toby Walsh

### Game Theoretic Resource Allocation

- **Urban Security: Game-Theoretic Resource Allocation**
  - Jason Tsai, Zhengyu Yin, Jun-yung Kuoke, D. Kempe, C. Kiekintveld, M. Tambe
- **Security Games with Arbitrary Schedules: A Branch and Price Approach**
  - Manish Jain, Erinn Karles, Christopher Kiekintveld, Milind Tambe, Fernando Ordoñe\n- **Complexity of Computing Optimal Stackelberg Strategies in Security Resource Allocation Games**
  - Dmytro Korshyn, Vincent Cominetti, R. Parr

### Mechanism Design 1

- **Approximation Algorithms and Mechanism Design for Minimax Approval Voting**
  - Ioannis Caragiannis, Dimitris Kalaitzis, Evangelos Markakis
- **Can Approximation Circumvent Gibbard-Satterthwaite?**
  - Ariel D. Procaccia
- **Nonmanipulable Randomized Tournament Selections**
  - Alon Altman, Robert Kleinberg

### Dimensionality Reduction 4

- **Semi-Supervised Dimension Reduction for Multi-Label Classification**
  - Buyue Qian, Ian Davidson
- **Assembling Users with Clustering Tasks by Combining Metric Learning and Classification**
  - Sumit Banu, Danyel Fisher, Steven M. Drucker, Hao Lu
- **Transfer Learning in Collaborative Filtering for Sparsity Reduction**
  - Weite Pan, Evan W. Xiang, Nathan N. Liu, Qiang Yang

### Search 4

- **Dealing with Infinite Loops, Underestimation, and Overestimation of Depth-First Proof-Number Search**
  - Atsuo Kishimura
- **Single-Frontier Bidirectional Search**
  - Ariel Felner, Carsten Moldenhauer, Nathan Sturtevant, Jonathan Schaeffer
- **Node Selection Query Languages for Trees**
  - Diego Calvanese, Giuseppe De Giacomo, Maria Grazia Lenzner, Moshe Y. Vardi

### Algorithms 1

- **Topological Relations between Convex Regions**
  - Sanjiang Li, Weining Liu
- **Trial-Based Dynamic Programming for Multi-Agent Planning**
  - Feng Wu, Shlomo Zilberstein, Xiaoping Chen
- **A Decentralized Coordination Algorithm for Mobile Sensors**
  - Ruben Siandar, Francesco Maria Della Fave, Alex Rogers, Nicholas R. Jennings

### Mechanism Design 2

- **Accounting Mechanisms for Distributed Work Systems**
  - Soen Seiden, Jar Tang, David C. Parkes
- **Tolerable Manipulability in Dynamic Assignment without Money**
  - James Zou, Sajit Gujar, David Parkes
- **Truth, Justice, and Cake Cutting**
  - Ariel D. Procaccia

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**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.**

**Student Reception, 5:45-6:45 PM, International F/G/H, 6th Floor**
ATLANTA E

IICAI-JAIR Best Paper Prize
Adnan Darwiche, JAIR Editor-in-Chief

AAA Classic Paper and Distinguished Service Awards
Eric Horvitz, AAAI Past President and Awards Committee Chair
and Henry Kautz, AAAI President

ATLANTA F

9:00 – 10:00 AM
AAA-10 Keynote Address:
Intelligent Interaction with the Real World
Leslie Pack Kaelbling (Massachusetts Institute of Technology)
Peachtree Ballroom, 8th Floor

ATLANTA G

AI and the Web: Mining Logs
Diversifying Query Suggestion Results
Hao Ma, Michael R. Lyu, Irwin King

Session Based Click Features for Recency Ranking
Yousufi Inagaki, Naruyama Sadagopan,
Georges Dupret, Cuiu Liao, Anil Dong, Yi Chang, Zhahui Zheng

Prioritization of Domain-Specific Web Information Extraction
Jan Huang, Cong Yu

ATLANTA H

IAAI Invited Talk: Robert S. Engelmore Memorial Award Lecture
Cancer: A Computational Disease that AI Can Cure
Joy M. Tenenbaum (CollabRx Inc.)

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.

Student Reception, 5:45–6:45 PM, International F/G/H, 6th Floor

CONFERENCE SCHEDULE—TUESDAY, JULY 13  11
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<th>ATLANTA C</th>
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| **AAAI-10 Invited Talk**
Challenges for AI in Computational Sustainability
Carla P. Gomes (Cornell University)
Peachtree Ballroom, 8th Floor |

Social Choice 1
Fast Local Search Algorithm for Weighted Feedback Arc Set in Tournaments
Fedor V. Fomos, Daniel Lehman, Venkatesh Raman, Salil Sacks
Good Rationalizations of Voting Rules
Edith Elkind, Piotr Faliszewski, Arkadii Slinko
Stackelberg Voting Games: Computational Aspects and Paradoxes
Lirong Xia, Vincent Conitzer | Clustering 1
Gaussian Mixture Model with Local Consistency
Jialu Liu, Dung Cai, Xiaofei He
Multitask Bregman Clustering
Jiawen Zhang, Changshui Zhang
Efficient Spectral Feature Selection with Minimum Redundancy
Zhang Zhao, Lei Wang, Huan Liu |

**Probabilistic Inference**
New Mini-Bucket Partitioning Heuristics for Bounding the Probability of Evidence
Emma Rollon, Rina Dechter
Efficient Belief Propagation for Utility Maximization and Repeated Inference
Aniruddh Nath, Pedro Domingos
Efficient Lifting for Online Probabilistic Inference
Aniruddh Nath, Pedro Domingos |

**Machine Learning**
Smooth Optimization for Effective Multiple Kernel Learning
Zenglin Xu, Rong Jin, Shenghuo Zhu, Michael R. Lyu, Iron King
Multi-Task Active Learning with Output Constraints
Yi Zhang
Grouping Strokes into Shapes in Hand-Drawn Diagrams
Eric J. Petersen, Thomas F. Stathopoulos, Eric Doi, Christine Alvarado |

Social Choice 2
Voting Almost Maximizes Social Welfare Despite Limited Communication
Ioannis Caragiannis, Ariel D. Procaccia
Cloning in Elections
Edith Elkind, Piotr Faliszewski, Arkadii Slinko
Compilation Completeness of Common Voting Rules
Lirong Xia, Vincent Conitzer |

**Clustering 2**
Cost-Sensitive Semi-Supervised Support Vector Machine
Yu-Feng Li, James T. Kwok, Zhi-Hua Zhou
Adaptive Transfer Learning
Bin Cao, Siyi Jin, Lin Fan, Yu Zhang, Dhi-Van Yeung, Qiang Yang
Nonparametric Curve Extraction Based on Ant Colony System
Qing Yan, Qian He, Zhongzhi Shi |

**MDPs**
Relational Partially Observable MDPs
Chenggang Wang, Roni Khardon
Robust Policy Computation in Reward-Uncertain MDPs Using Nondominated Policies
Kevin Regan, Craig Boutilier
Symbolic Dynamic Programming for First-Order POMDPs
Scott Sanner, Kristian Kersting |

**Relational Learning**
Structure Learning for Markov Logic Networks with Many Descriptive Attributes
Hasan Kheiroudi, Oliver Schulte, Yong Man, Xiaoyuan Xu, Bahareh Bina
Informed Lifting for Message-Passing
Kristian Kersting, Yousef El Massaoudi, Bahar Ahmadi, Farhad Hashi
Bayesian Matrix Factorization with Side Information and Dirichlet Process Mixtures
Ian Porteous, Arthur Asuncion, Max Welling |

Social Choice 3
Convergence to Equilibria in Plurality Voting
Reshef Meir, Maria Poblenkov, Jeffrey S. Rosenschein, Nicholas R. Jennings
Possible Winners When New Candidates Are Added: The Case of Scoring Rules
Yann Chunalepy, Jerome Lang, Nicolas Manset, Jerome Monnot
Lifting Rationality Assumptions in Binary Aggregation
Umberto Grandi, Ulle Endriss |

**Classification**
What if the Irresponsible Teachers Are Dominating? A Method of Training on Samples and Clustering on Teachers
Shao Chen, Jiawen Zhang, Guangyun Chen, Changshui Zhang
Learning Discriminative Piecewise Linear Models with Boundary Points
Kun Gai, Changshui Zhang
Multi-Task Sparse Discriminant Analysis (MTSDA) with Overlapping Categories
Yahong Yan, Fei Wu, Jinxu Jia, Yueting Zhuang, Bin Yu |

**Integrated Intelligence: Goal Processing, Planning, and Execution**
Integrating a Closed World Planner with an Open World Robot: A Case Study
Kartik Talampapula, J. Benton, Paul Schermerhorn, Subbarao Kambhampati, M Schuez
Goal-Driven Autonomy in a Navy Strategy Simulation
Matthew Melineaux, Matthew Klenk, David W. Aha
Creating Dynamic Story Plots with Continuous Multiagent Planning
Michael Brenner |

**Reinforcement Learning 1**
Bayesian Policy Search for Multi-Agent Role Discovery
Aaron Wilson, Alan Fern, Prasad Tadepalli
Reinforcement Learning via Practice and Critique Advice
Khitij Judah, Sathish Roy, Alan Fern, Thomas G. Dietterich
Reinforcement Learning via AIXI Approximation
Joel Veness, Kye Sieng Ng, Marcus Hutter, David Silver |

Social Choice 4
Facilitating the Evaluation of Automated Negotiators Using Peer Designed Agents
Rae Lee, Sari Knaus, Yinon Oshrat, Yutaka (Rob) Gai
The Generic Algorithm as a General Diffusion Model for Social Networks
Mayurk Lahiri, Manuel Cebrian
Facial Age Estimation by Learning from Label Distributions
Xin Geng, Kate Smith-Miles, Zhi-Hua Zhou |

**Causality and Dependency Learning**
Dependence Minimizing Regression with Model Selection
Mahito Yamada, Manash Sugiyama
Learning Spatial-Temporal Varying Graphs with Applications to Climate Data Analysis
Xi Chen, Yan Liu, Han Liu, Jaime G. Carbonell
G-Optimal Design with Laplacian Regularization
Chun Chen, Zhengguang Chen, Jianwu Bu, Can Wang, Lijun Zhang, Cheng Zhang |

**Probabilistic Knowledge Representations**
Inducing Probability Distributions from Knowledge Bases
Jianbing Ma, Weiru Liu, Anthony Hunter
DITPROLOG: A Decision-Theoretic Probabilistic Prolog
Guy Van den Broeck, Ingo Thon, Martijn van Otterlo, Luc De Raedt
Probabilistic Possible Winner Determination
Yoram Bachrach, Nadja Betzler, Piotr Faliszewski |

**Reinforcement Learning 2**
Using Bisimulation for Policy Transfer in MDPs
Pablo Samuel Castro, Donna Precup
Multi-Agent Learning with Policy Prediction
Chunjie Zhang, Victor Lesser
An Analytic Characterization of Model Minimization in Factored Markov Decision Processes
Wenyuan Cao, Tze-Yun Leong |

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 Reception, 6:30–9:30 pm, Peachtree Ballroom, 8th Floor
**CONFERENCE SCHEDULE—WEDNESDAY, JULY 14**

**ATLANTA E**

**9:00—10:00 AM**

**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 Reception, 6:30–9:30 PM, Peachtree Ballroom, 8th Floor**
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<td>Constraint Programming and Artificial Intell...</td>
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<td>Applications and Opportunities</td>
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<td>11:30 AM</td>
<td>Modeling Preferences and Utilities</td>
<td>ATLANTA A</td>
<td>Simultaneous Elicitation of Preference Features and Utility</td>
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<td>Craig Boutilier, Kevin Regan, Paolo Viapianian</td>
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<td>Decomposed Utility Functions and Graphical Models for Reasoning about Preferences</td>
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<td>Ronen I. Brafman, Yagil Engel</td>
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<td>The Induction and Transfer of Declarative Bias</td>
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<td>Will Bridewell, Ljupco Todorovski</td>
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<td>Increasing Threshold Search for Best-Valued Agents</td>
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<td>Decision-Theoretic Control of Crowded-Sourced Workflows</td>
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<td>Integrating Sample-Based Planning and Model-Based Reinforcement Learning</td>
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<td>SixthSense: Fast and Reliable Recognition of Dead Ends in MDPs</td>
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<td>On the Use of Prime Implicates in Conformant Planning</td>
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<td>Independent Additive Heuristics Reduce Search Multiplicatively</td>
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<td>User-Specific Learning for Recognizing a Singer’s Intended Pitch</td>
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<td>9:00 PM</td>
<td>AI and Bioinformatics</td>
<td>ATLANTA B</td>
<td>Nectar: Enhanced ASP by Functions: Decidable Classes and Implementation Techniques</td>
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<td>Francesco Calimeri, Susanna Ciza, Giovanni Battistella Ianni, Nicola Leone</td>
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<td>Computationally Feasible Automated Mechanism Design: General Approach and Case Studies</td>
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<td>Mingyu Guo, Vincent Conitzer</td>
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<td>Comparing Position Assignments Computationally</td>
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<td>Darw X R. Thompson, Kevin Leyton-Brown</td>
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<td>10:00 PM</td>
<td>Activity Recognition</td>
<td>ATLANTA D</td>
<td>Using Closed Captions as Supervision for Video Activity Recognition</td>
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<td>Ruix He, Emma Brunskill, Nicholas Roy</td>
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<td>Compressing POMDPs Using Locality Keeping Non-Negative Matrix Factorization</td>
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<td>Georgios Theoharcos, Srirabath Mahadevan</td>
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<td>Structured Parameter Elicitation</td>
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<td>Li Ling Ko, David Hsu, Woe Sun Lee, Sylvia C. W. Ong</td>
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<td>11:00 PM</td>
<td>Reasoning about Action</td>
<td>ATLANTA B</td>
<td>Nectar: Automatic Derivation of Finite-State Machines for Behavior Control</td>
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<td>Itai Ashlagi, Moshe Tennenholtz, Avi Zohar</td>
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<td>Competing Schedulers</td>
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<td>Itai Ashlagi, Moshe Tenenholz, Avi Zohar</td>
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<td>Integrated Intelligence: Learning Methods to Generate Good Plans: Integrating HTN Learning and Reinforcement Learning</td>
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<td>Chad Hogg, U. Kater, H. Muñoz-Avila</td>
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Coffee breaks will be held at 10:00 AM and 4:00 PM. The lunch break will be held from 12:30 PM to 1:30 PM.
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<th>ATLANTA E</th>
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<tr>
<td><strong>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.</strong></td>
<td><strong>Voting</strong>&lt;br&gt;Bypassing Combinatorial Protections: Polynomial-Time Algorithms for Single-Peaked Electorates&lt;br&gt;Felix Brandt, Markus Brill, Edith Hemaspaandra, Lane A. Hemaspaandra</td>
<td><strong>Physically Grounded AI: Human Behaviours</strong>&lt;br&gt;A Layered Approach to People Detection in 3D Range Data&lt;br&gt;Luciano Spinnato, Kai O. Arras, Rudolph Triebel, Roland Siegwart</td>
<td><strong>AI and the Web: Knowledge Acquisition</strong>&lt;br&gt;Commonsense Knowledge Mining from the Web&lt;br&gt;Chi-Hon Yu, Hsin-Hsi Chen</td>
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<td><strong>Coalitional Structure Generation in Skill Games</strong>&lt;br&gt;Yoram Bachrach, Reshef Meir, Kyomin Jung, Puhmeet Kohli</td>
<td><strong>Physically Grounded AI: Robot Motion</strong>&lt;br&gt;Online Learning of Uneven Terrain for Humanoid Bipedal Walking&lt;br&gt;Seung-Joon Yi, Byoung-Tak Zhang, Daniel D. Lee</td>
<td><strong>AI and the Web: Social Networks</strong>&lt;br&gt;Predicting the Importance of Newsfeed Posts and Social Network Friends&lt;br&gt;Tim Paub, Michael Gamon, Scott Counts, David Maxwell Chichering, Aman Dhesi</td>
<td><strong>IAAI-10 Invited Talk</strong>&lt;br&gt;AI-Based Software Defect Predictors: Applications and Benefits in a Case Study (Deplayed)&lt;br&gt;Ayse Toun, Ayse Bener, Resat Kale</td>
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<td><strong>Fixing a Tournament</strong>&lt;br&gt;Virginia Vasileshka Williams</td>
<td><strong>Equilibria</strong>&lt;br&gt;Intentions in Equilibrium&lt;br&gt;John Grant, Sarit Kraus, Michael Wooldridge</td>
<td><strong>Equilibria</strong>&lt;br&gt;A Distributed Algorithm for Optimising over Pure Strategy Nash Equilibria&lt;br&gt;Ariane C. Chapman, Alessandro Farnelli, Enrique Munoz de Cote, Alex Rogers, Nicholas R. Jennings</td>
<td><strong>Game Theory 2</strong>&lt;br&gt;Dealing with Complexity 2&lt;br&gt;A Probalistic-Logical Framework for Ontology Matching&lt;br&gt;Mathias Nipert, Christian Meliche, Heiner Stuckenschmidt</td>
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<td><strong>Markets and Networks</strong>&lt;br&gt;Generalized Task Markets for Human and Machine Computation&lt;br&gt;Daftus Shahaf, Eric Horvitz</td>
<td><strong>Physically Grounded AI: Behaviour Modelling</strong>&lt;br&gt;A Bayesian Nonparametric Approach to Modeling Mobility Patterns&lt;br&gt;Joshua Joseph, Finale Doshi-Velez, Nicholas Roy</td>
<td><strong>Equilibria</strong>&lt;br&gt;Beyond Equilibrium: Predicting Human Behavior in Normal Form Games&lt;br&gt;James R. Wright, Kevin Leyton-Brown</td>
<td><strong>Physically Grounded AI: Robot Motion</strong>&lt;br&gt;Online Learning of Uneven Terrain for Humanoid Bipedal Walking&lt;br&gt;Seung-Joon Yi, Byoung-Tak Zhang, Daniel D. Lee</td>
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<td><strong>Physically Grounded AI: Behaviour Modelling</strong>&lt;br&gt;A Low False Negative Filter for Detecting Rare Bird Species from Short Video Segments&lt;br&gt;Dezhun Song, Yiliang Xu</td>
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<td><strong>Game Theory 1</strong>&lt;br&gt;Private and Third-Party Randomization in Risk-Sensitive Equilibrium Concepts&lt;br&gt;Mickey Braun, Michael Kearns, Umar Syed</td>
<td><strong>Game Theory 1</strong>&lt;br&gt;Automated Program Debugging via Multiple Predicate Switching&lt;br&gt;Yongmei Liu, Bing Li</td>
<td><strong>Game Theory 2</strong>&lt;br&gt;Dealing with Complexity 1&lt;br&gt;Automated Program Debugging via Multiple Predicate Switching&lt;br&gt;Yongmei Liu, Bing Li</td>
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<td><strong>Equilibria</strong>&lt;br&gt;Generalized Task Markets for Human and Machine Computation&lt;br&gt;Daftus Shahaf, Eric Horvitz</td>
<td><strong>Equilibria</strong>&lt;br&gt;Coalition Structure Generation Based on Distributed Constraint Optimization&lt;br&gt;Suguru Ueda, Atsushi Iwasaki, Makoto Yebou, Marius Calin Silaghi, Katsutoshi Hiramaye, Toshihito Matsui</td>
<td><strong>Game Theory 2</strong>&lt;br&gt;Dealing with Complexity 2&lt;br&gt;Dominance Testing via Model Checking&lt;br&gt;Ganesh Ram Santhanam, Samik Basu, Vasant Honavar</td>
<td><strong>Game Theory 2</strong>&lt;br&gt;An Approximate Subgame-Perfect Equilibrium Computation Technique for Repeated Games&lt;br&gt;Andriy Burkov, Brahim Chaib-draa</td>
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<td><strong>Equilibria</strong>&lt;br&gt;Generalized Task Markets for Human and Machine Computation&lt;br&gt;Daftus Shahaf, Eric Horvitz</td>
<td><strong>Equilibria</strong>&lt;br&gt;Algorithms for Finding Approximate Formations in Games&lt;br&gt;Patrick R. Jordan, Michael P. Wellman</td>
<td><strong>Game Theory 2</strong>&lt;br&gt;Two-Player Game Structures for Generalized Planning and Agent Composition&lt;br&gt;Giuseppe De Giacomo, Paolo Felli, Fabio Pastrini, Sebastian Sardina</td>
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<td><strong>Game Theory 2</strong>&lt;br&gt;Reasoning about Imperfect Information Games in the Epistemic Situation Calculus&lt;br&gt;Vasileshka Belle, Gerhard Lakemeyer</td>
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# Innovative Applications of Artificial Intelligence (IAAI)

All IAAI sessions will be held in Atlanta H, 7th Floor, except where noted.

## Tuesday, July 13

8:30 – 9:00 AM  
**AAAI-10/IAAI-10 Opening Ceremony**  
Peachtree Ballroom, 8th Floor

9:00 – 10:00 AM  
**AAAI-10 Keynote Address**  
Intelligent Interaction with the Real World  
*Leslie Pack Kaelbling* (Massachusetts Institute of Technology)  
Peachtree Ballroom, 8th Floor

10:20 – 11:20 AM  
**Invited Talk: Robert S. Engelmore Memorial Award Lecture**  
Cancer: A Computational Disease that AI Can Cure  
*Jay M. Tenenbaum* (CollabRx Inc.)

1:50 – 2:50 PM  
**Health & Medicine**  
Estimation of Human Internal Temperature from Wearable Physiological Sensors  
*Mark. J. Buller, William J. Tharion, Reed W. Hoyt, Odest Chadwicke Jenkins*

3:00 – 4:00 PM  
**Knowledge-Based Systems I**  
Reinforcement Learning for Closed-Loop Propofol Anesthesia: A Human Volunteer Study  
*Brett L Moore, Periklis Panousis, Vivek Kulkarni, Larry D Pyeatt, Anthony G Doufas*

4:20 – 5:20 PM  
**Agents**  
A Centralized Multi-Agent Negotiation Approach to Collaborative Air Traffic Resource Management Planning  
*Peter A. Jarvis, Shaun Wolfe, Francis Enomoto, Robert Nado, Maarten Sierhuis*

## Wednesday, July 14

9:00 – 10:00 AM  
**Sensor Networks & Distributed AI**  
Fast, Accurate, and Practical Identity Inference Using TV Remote Controls  
*Mariana Phleeg, Magdriel Galan, Richard Lee, Branislav Kveton, Jeffrey Hightower*

## Thursday, July 15

9:00 – 10:00 AM  
**Knowledge-Based Systems III**  
Natural Language Aided Visual Query Building for Complex Data Access  
*Shimei Pan, Michelle Zhou, Keith Hock, Peter Kiss*

10:20 – 11:20 AM  
**Invited Talk**  
A New Paradigm of Geriatric Care Empowered by Applied AI  
*Majd Alwan* (Center for Aging Services Technologies)

11:30 AM – 12:30 PM  
**Machine Learning II**  
AI-Based Software Defect Predictors: Applications and Benefits in a Case Study  
*Ayse Tosun, Ayse Bener, Resat Kale*

6:30 – 9:30 PM  
**AAAI-10 Poster Session Reception**  
Peachtree Ballroom, 8th Floor

## Friday, July 16

9:00 – 10:00 AM  
**Knowledge-Based Systems II**  
Learning from Sensors and Past Experience in an Autonomous Oceanographic Probe  
*Albert Vilamala, Enric Plaza, Josep Lluis Arcos*

## Other Notes

- **AAAI-10 Poster Session**  
Peachtree Ballroom, 8th Floor

- **Sketching**  
A Sketch Recognition System for Recognizing Free-Hand Course of Action Diagrams  
*T. Hammond, D. Logsdon, B. Paulson, J. Johnston, J. Peschel, A. Wein, and P. Talee*

- **Sketching**  
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The poster session will be held Wednesday, July 14, in the Cachetree Ballroom, 6:30 - 9:30 pm. (See map, p. 23)

AAA1-10 Main Track Technical Papers
Constraints, Satisfiability, and Search
Transmission Network Expansion Planning with Simulation Optimization
Russell Bent, Alen Berscheid, C. Loren Toole
Propagating Conjunctions of ALLDIFFERENT Constraints
Chih-An Bessiere, George Katsirelos, Nina Narodytska, Claude-Guy Quimper, Toby Walsh
A Novel Transition Based Encoding Scheme for Planning as Satisfiability
Bryan Huang, Yvain Chen, Weixing Zhang
Search Space Reduction Using Swarm Hierarchies
Nir Porcher, Arie Zehar, Jeffrey S. Rosenchein, Ariel Felner
Coalition Structure Generation Based on Distributed Constraint Optimization
Suguru Ueda, Atsushi Iwasawa, Makoto Yokoo, Marius Calin Slapni, Katsuhisa Hirayama, Toshitaka Matsui
Knowledge Representation and Reasoning
Decomposed Utility Functions and Graphical Models for Resource Allocation
Ronen 1. Bronfman, Yagil Engel
A Lower Bound on the Size of Decomposable Negation Normal Form
Knot Pipirasantisawat, Adrian Darwiche
Machine Learning
The Genetic Algorithm as a General Diffusion Model for Social Networks
Maqary Bahri, Manuel Cebrian
Gaussian Mixture Model with Local Consistency
Iliia Liu, Deng Cai, Xiaofei He
Discovering Local Range Properties of Social Networks with Multi-Valued Time-Inhomogeneous Models
Danny Wyatt, Tanazem Choudhry, Jeff Bilmes
Multiagent Systems
A Distributed Algorithm for Optimising over Pure Strategy Nash Equilibria
Archie C. Chapman, Alessandro Farinelli, Enrique Muñoz de Casa, Alex Rogers, Nicholas R. Jennings
Truth, Justice, and Cake Cutting
Yiling Chen, John K. Lai, David C. Parkes, Ariel D. Procaccia
Urban Security: Game-Theoretic Resource Allocation in Networked Physical Domains
Jason Tai, Zhenning Yin, Jun-young Kwak, David Kempe, Christopher Kiekintveld, Milind Tambe
Fixing a Tournament
Virginia Vasilevska Williams
Tolerable Manipulability in Dynamic Assignment without Money
James Zou, Sajit Cusar, David Parkes
Multidisciplinary Topics
A General Game Description Language for Incomplete Information Games
Michael Thielscher
Reasoning about Plans, Processes and Actions
To Max or Not to Max: Online Learning for Speeding Up Optimal Planning
Catalin-Douglas Molnar, Karthik Kpar, Shaul Markovitch
An Analytic Characterization of Model Minimization in Factored Markov Decision Processes
Wenyuan Gao, Tze-Yun Leong
SixthSense: Fast and Reliable Recognition of Dead Ends in MDPs
Andrey Kolobov, Mausam, Daniel S. Weld
Symbolic Dynamic Programming for First-Order POMDPs
Scott Sanner, Krishnan Kasturirangan
Reasoning under Uncertainty
Simultaneous Elicitation of Preference Features and Utility
Craig Boutilier, Kevin Regan, Paolo Viappiani
Main Track Short Papers
Saving Redundant Messages in BnB-ADOPT
Patricia Gutierrez, Pedro Meseguer
An Optimization Variant of Multi-Robot Path Planning is Intractable
Pavel Surynek
Multi-Label Classification: Inconsistency and Class Balance
Huat Wang, Chris Ding, Heng Huang
Special Track on AI and Bioinformatics
Predicting Structural and Functional Sites in Proteins by Searching for Maximum-Weight Cliques
Franca Mancia, Elisa Cilia, Mauro Brunato, A. Pasaerini
A Fast Heuristic Search Algorithm for Finding the Longest Common Subsequence of Multiple Strings
Qingqun Wang, Shu Pan, Yi Shang, Dmitry Korlin
Special Track on AI and the Web
Toward an Architecture for Never-Ending Language Learning
Andrew Carlson, Justin Betteridge, Bryan Kissel, Barry Setton, Esteban R. Hruschka Jr., Tom M. Mitchell
Optimal Strategies for Reviewing Search Results
Jeff Huang, Anna Kazepshna
Utilizing Context in Generalize Bayesian Models for Linked Corpora
Saurabh Katarya, Prasenjit Mitra, Sumit Bhattacharyya
A Probabilistic Logical Framework for Ontology Matching
Mathias Niepert, Christian Mellich, Heiner Stuckenschmidt
Extraction and Visualization of Implicit Social Relations on Social Networking Services
Mireasu Song, Wonhye Lee, Jungbaan Kim
How Incomplete Is Your Semantic Web Reasoner? Gaëtan Stéphan, Bernardo Cuena Grau, Ian Horrocks
Heterogeneous Transfer Learning for Image Classification
Yin Zhu, Sinne Jadin Pan, Yuijiang Chen, Cai-Rong Xue, Qing Yang, Yong Yu
Special Track on Integrated Intelligence
An Integrated Systems Approach to Explanation-Based Conceptual Change
Scott E. Friedman, Kenneth D. Forbus
Supporting Wilderness Search and Rescue with Integrated Physical and Logical Information at the Right Time and the Right Place
Lanny Lin, Michael Riechert, Michael A. Goodrich, Bryan S. Mowa
Integrated Systems for Inducing Spatio-Temporal Process Models
Chunli Park, Will Bradshaw, Pat Langley
Instance-Based Online Learning of Deterministic Relational Action Models
Joseph Z. Xu, John E. Laird
EAA1-10 Posters
A Simulator for Teaching Robotics Programming Using the iRobot Create
Andrew Hettlinger, Matthew R. Boutell
Teaching Artificial Intelligence and Robotics via Games
Sven Koening
EAA1-10 Student Abstracts
A Distributed Method for Evaluating Properties of a Robot Formation
Brent Beer, Ross Mead, Jerry Weinberg
Towards Multiagent Meta-Level Control
Shanjuan Cheng, Amita Raja, Victor Lesser
Finding Semantic Inconsistencies in UMLS Using Answer Set Programming
Halit Erdagac, Olivier Bodenreder, Esa Erenk
Combining Human Reasoning and Machine Computation: Towards a Memetic Network Solution to Satisfiability
Daniél S. Farenzena, Luis C. Lamb, Ricardo M. Araujo
Interactive Categorization of Containers and Non-Containers by Unifying Categorizations Derived from Multiple Exploratory Behaviors
Shane Griffin, Alexander Steckley
A Trust Model for Supply Chain Management
Yasaman Haghighan, Marie deladnis
Intelligent Time-Aware Query Translation for Text Sources
Amal Kaluarachchi, Aparna S. Varde, Jing Peng, Anna Feldman
Temporal Planning for Interacting Durative Actions with Continuous Effects
Serdar Kecici, Sanem Saral Tatar
Control Model Learning for Whole-Body Mobile Manipulation
Reece Riemenschneider
Towards Interesting Patterns of Hard CSPs with Functional Constraints
Chendong Li
Integrating Transfer Learning in Synthetic Student
Nan Li, William W. Cohen, Kenneth R. Koolker
Learning from Concept Drifting Data Streams with Unlabeled Data
Peipei Li, Xindong Wu, Xuegang Hu
A Phrase-Based Method for Hierarchical Clustering of Web Snapshots
Zhao Li, Xindong Wu
Distributed Auction-Based Initialization of Mobile Robot Formations
Rob Long, Ross Mead, Jerry B. Weinberg
Materializing Inferred and Uncertain Knowledge in RDF Datasets
James P. McGeehlin, Latifur Khan
Relational Reinforcement Learning in Infinite Mario
Shiwali Mohan, John E. Laird
Evolved Intrinsic Reward Functions for Reinforcement Learning
Scott Niebaum
Team Formation with Heterogeneous Agents in Computer Games
Robert G. Price, Scott D. Goodman
Semantic Search in Linked Data: Opportunities and Challenges
Nirmal Hairanian Shahri
Task Space Behavior Learning for Humanoid Robots Using Gaussian Mixture Models
Kausubh Subramanian
Genome Rearrangement: A Planning Approach
Reena Dhillon, Ewa Etem
Toward Learning to Press Doorbell Buttons
Liping Wu, Vladimir Subhly, Alexander Steckley
Learning to Surface Deep Web Content
Zhahuai Wu, Lu Jiang, Qinghua Zhong, Jun Liu
Market-Based Algorithms for Allocating Complex Tasks
Xiaoming Zheng, Sven Koening
AAAI-10 Doctoral Consortium Abstracts
Preferences and Learning in Multi-Agent Negotiation
Reyhan Akyolun
Interactive Task-Plan Learning
Shuaun Dong
Nonparametric Bayesian Approaches for Reinforcement Learning in Partially Observable Domains
Fernando Dehkhoda
Local Optimization for Simulation of Natural Motion
Tom Erez
On Multi-Robot Area Coverage
Pramod Fadl
Detecting Social Ties and Copying Events from Affiliation Data
Lisa Fredriksen
Continual On-Line Planning
Sofia Lemons

Poster Session

POSTER SESSION  17
Robotic exhibits complement workshop discussions with actual demonstrations of the state of the art in all areas of robotics research, education, and commercial development. 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.

Robot Exhibition

Robotics Program

The Robot Exhibition

Robotics exhibits complement workshop discussions with actual demonstrations of the state of the art in all areas of robotics research, education, and commercial development. 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.

Robot Exhibition Teams

Bard College (The IMP)
Brown University Robot Team
Bryn Mawr College
Carnegie Mellon University (Tekkotsu Lab)
City University of New York (MetroBotics)
Colby College
Duke University
Drexel University
Harvey Mudd College (HMC)
Intel Labs/University of Washington
Road Narrows LLC and Southern Illinois University Edwardsville (Rapid Prototypers)
Rutgers University (Fine Young Padowsans)
Rose-Hulman Institute of Technology (iRobot Create Simulator)
University of Alabama (UA Chess Bot)
University of Pennsylvania
Virginia Institute of Technology

Robot Program Organizing Committee

Event Cochairs
Andrea Thomaz (Georgia Tech) and Monica Anderson (University of Alabama)

Workshop Chair
Ayanna Howard (Georgia Tech)

Small Scale Mobile Manipulation: Robotic Chess Chair
Dave Touretzky (Carnegie Mellon University)

Learning by Demonstration Chair
Sonia Chernova (MIT Media Lab)

Mobile Manipulation Cochairs
Matei Cioarla (Willow Garage) and Rada Rusu (Willow Garage)

Student Robotics Challenge Cochairs
Zach Daddys (Harvey Mudd College)

Competitions

AI Video Competition Awards

AI Video Competition (www.aivideo.org) Awards Ceremony will be held immediately after the opening reception. 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 Kenneth Stanley (University of Central Florida), Arnav Jhala (University of California, Santa Cruz), and Chad Jenkins (Brown University). Awards will be presented in the following categories: Best Video, Best Student Video.
and Most Informative Video. AAAI gratefully acknowledges the generous contributions of Google, Yahoo! Research, and Microsoft Research for their sponsorship.

AAAI Fifth Annual General Game Playing Competition

Monday – Tuesday, July 12 – 13, Roswell II, Eighth Floor

This year’s AAAI competition is designed to test the abilities of general game players by comparing their performance on a variety of previously unseen games. The competition will consist of two phases. On Monday, July 12, players will participate in preliminary rounds. On Tuesday, July 13, the top four finishers from the preliminary rounds will participate in semifinal and final rounds to determine an overall winner. (Note that, unlike competitions in previous years, there was no competition phase prior to the conference.) See games.stanford.edu for details. AAAI wishes to acknowledge the efforts of organizers Evan Cox and Michael Genesereth, which make this competition possible.

Computer Poker Competition

Tuesday, July 13, Roswell I, Eighth Floor

For the Fifth Annual AAAI Computer Poker Competition teams will develop programs for playing heads-up Texas Hold-Em, both limit and no-limit, and 3-player ring limit Texas Hold’em. 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). The winner of a competition will be determined by matches between bots that were submitted to that specific competition. If resources allow, unofficial results will also include matches between all pairs of bots in a division. 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. AAAI thanks Poker Competition organizer Nolan Bard and David Parkes, who serves as the impartial “arbiter” for the competition, for all their efforts in making this event possible.

Exhibit Program

Exhibit Program
Tuesday – Thursday, July 13 – 15
Atlanta Ballroom Foyer, Seventh Floor

Exhibit Hours
Tuesday, July 13 9:00 AM – 5:00 PM
Wednesday, July 14 9:00 AM – 5:00 PM
Thursday, July 15 9:00 AM – 12:00 PM

Exhibitors

AAAI Press
445 Burgess Drive
Menlo Park, CA 94025-3442
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Fax: 650-321-4457
Email: info10@aaai.org
www.aaai.org/Press/press.php

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781-430-3000
www.irobot.com/gi/research/
The iRobot Research Group conducts basic and applied research in robotics, ranging from perception and manipulation to mobility, navigation, and mapping. We work with ground robots and underwater robots, as well as unmanned aerial vehicles. We are always looking for partners to pursue externally-funded R&D opportunities. Stop by our exhibit table to learn more about the iRobot Research group and to enter a drawing for iRobot Create robots!

Taylor & Francis
5136 Upsen Hall
Ithaca, NY 14853-7501

The Institute for Computational Sustainability (ICS), founded in 2008 with support from an Expeditions in Computing grant from the National Science Foundation, advances research in the emerging field of Computational Sustainability. The vision of the institute is that computer scientists can and should play a key role in increasing the efficiency and effectiveness in the way we manage and allocate our natural resources, while enriching and transforming Computer Science and related fields. The institute is a joint venture involving scientists from Cornell University, Bowdoin College, the Conservation Fund, Howard University, Oregon State University, and the Pacific Northwest National Laboratory.

The MIT Press
55 Hayward Street
Cambridge, MA 02142
mitpress.mit.edu
The MIT Press publishes books and journals dealing with all facets of artificial intelligence, robotics and their related disciplines. Please come by our table to browse our newest publications and receive a 30% discount.

Institute for Computational Sustainability
5136 Upsen Hall
Ithaca, NY 14853-7501

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ADA Devices
The staff at Westin Peachtree Plaza 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, EAAI, and workshop programs. Tutorial and Workshop attendees must present their attendance tickets for admittance to the rooms. The Westin offers a 100% smoke-free environment. Smoking is not permitted in the hotel.

Banking
There is an ATM machine in the Westin Peachtree Plaza next to the gift shop on the fifth level. A Bank of America is located across the street in the Peachtree Center. The ATM machine is available 24 hours. The bank is open 9–4, Monday – Friday; closed Saturday and Sunday.

Business Center/Shipping
The Westin Peachtree Plaza’s Business Center is located on the fifth floor and provides services such as photocopying, facsimile, secretarial service, pager and cell phone rentals, shipping, computer use and rentals and office supplies. Open 24 hours; Westin guests may access with room key. Staffed hours: Monday – Friday, 7:30 AM – 4:00 PM.

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 Hilary Miskowski at the Georgia Institute of Technology at 404-894-2469.

Internet Access
AAAI-10 has arranged for wireless Internet access in the Westin Peachtree Plaza meeting spaces. Wireless Internet access is available in the Westin Peachtree Plaza guest rooms for a discounted rate of $7.95 per 24-hour period. Registration and billing can be setup 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
Covered parking is available at the Westin for $19.00 per day. An additional charge is incurred for valet parking, which includes in/out privileges. The fee for a lost ticket is $26.

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 CDs
Each technical registrant will receive a ticket with the registration materials for one copy of the conference CD. Tickets can be redeemed on the onsite registration area in the Overlook, located on the sixth floor of the Westin during registration hours. All tickets must be redeemed onsite by Thursday, July 15 at 11:00 AM. AAAI cannot mail CDs to registrants after the conference.

Hotel Restaurants
A flyer containing a listing and map of other local restaurants is included in the registration bags.

Starbucks® Coffee Bar, Lobby
Starbucks offers a variety of coffee and sells it along with fresh, rich-brewed, Italian style espresso beverages and a variety of pastries and confections. Daily, 6:00 AM – 6:00 PM

The Café, Lobby
The Café serves a Southern-style buffet breakfast including eggs made to order, homemade breakfast cereals, fresh pastries, Belgian waffles and fruit. A la carte items also are available. Monday – Friday, 6:30 AM – 10:30 AM Saturday – Sunday, 7:00 AM – 12:00 PM

The Lobby Bar
The Lobby Bar is the place to catch up with friends and colleagues, have a light bite or wind up an evening. Light fare available. Monday – Friday, 4:00 PM – 12:00 AM Saturday, 2:00 PM – 12:00 AM Sunday, 2:00 PM – 11:30 PM

Sun Dial Restaurant Bar and View
View Atlanta’s breathtaking skyline from a glass-walled dining room that slowly revolves through a full 360 degrees 73 stories above the street.

The View: 10:00 AM – 11:00 PM

Airport Transportation
Taxi
Taxis are available for pick-up outside the main lobby of the Westin Peachtree Plaza. A ride from the Westin Peachtree Plaza to the Hartsfield-Jackson Atlanta International Airport takes approximately 30 minutes and costs between $25-30.

Shared-Ride Shuttle
Link Shuttle – (404) 564-0607 or (404) 524-3400. Cost is $16.50 per person one way, or $29 per person round trip www.theatlantalink.com/
City Transportation
The Metropolitan Transit Authority (MARTA) operates Atlanta’s local public transportation system. The Westin is located on the MARTA Line at Peachtree Center Station. For information on how to ride MARTA to and from the airport, please see www.itsmarta.com/airport.aspx. General information is also available about how to use MARTA throughout the city at www.itsmarta.com.

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.

Workshop Technical Reports and Working Notes
Workshop participants will receive ticket in their registration envelopes, which can be redeemed for a copy of a CD containing the notes for their workshop. In cases where the workshop produced a technical report, participants will receive a CD containing all the technical reports for the entire AAAI-10 workshop program. For attendees at a workshop with working notes only (W4, W5, and W8), a CD will be provided with only the notes for the individual workshop. Tickets should be redeemed in the individual workshop rooms.

Disclaimer
In offering the Westin Peachtree Plaza, Georgia Institute of Technology, Freeman, Hartsfield-Jackson Atlanta International 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-10/IAAI-10 program, AAAI assumes no responsibility for and will not be liable for any personal delay, inconvenience 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 Overlook on the sixth floor of the Westin Peachtree Plaza, beginning Sunday, July 11. Registration hours are:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, July 11</td>
<td>7:30 AM – 5:00 PM</td>
</tr>
<tr>
<td>Monday, July 12</td>
<td>7:30 AM – 5:00 PM</td>
</tr>
<tr>
<td>Tuesday, July 13</td>
<td>8:00 AM – 5:00 PM</td>
</tr>
<tr>
<td>Wednesday, July 14</td>
<td>8:30 AM – 5:00 PM</td>
</tr>
<tr>
<td>Thursday, July 15</td>
<td>8:30 AM – 12:00 PM</td>
</tr>
</tbody>
</table>

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-10/IAAI-10 technical program registration includes admission to all technical paper and poster sessions, invited talks, EAAI-10, exhibits, demos, and competitions, the opening reception, and a copy of the AAAI-10/IAAI-10 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:

<table>
<thead>
<tr>
<th>Fee Category</th>
<th>Fee Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Member</td>
<td>$820</td>
</tr>
<tr>
<td>Regular Nonmember</td>
<td>$985</td>
</tr>
<tr>
<td>Student Member</td>
<td>$320</td>
</tr>
<tr>
<td>Student Nonmember</td>
<td>$420</td>
</tr>
</tbody>
</table>

- **AAAI Platinum Fees**

  (Includes one year new or renewal membership in AAAI)

<table>
<thead>
<tr>
<th>Fee Category</th>
<th>Fee Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular US/Canada</td>
<td>$945</td>
</tr>
<tr>
<td>Regular International</td>
<td>$965</td>
</tr>
<tr>
<td>Student US/Canada</td>
<td>$375</td>
</tr>
<tr>
<td>Student International</td>
<td>$395</td>
</tr>
</tbody>
</table>

- **Symposium on Educational Advances in Artificial Intelligence (EAAI-10)**

  The AAAI-10/IAAI-10 technical program registration includes participation in EAAI-10 for invited participants and other interested individuals. Although there is no additional cost for this event, registration is required. (Registration for EAAI-10 only is not available).

- **Tutorial Forum**

  Includes admittance to up to four consecutive tutorials. In addition to the fee below, all tutorial participants must register for the AAAI-10/IAAI-10 technical program.

<table>
<thead>
<tr>
<th>Fee Category</th>
<th>Fee Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>$160</td>
</tr>
<tr>
<td>Student</td>
<td>$50</td>
</tr>
</tbody>
</table>

- **Workshop Program**

  Includes admittance to one workshop and the accompanying technical report.

  **Workshop with technical program**

  Regular: $180  Student: $160

  **Workshop Only (no technical program)**

  Regular: $325  Student: $210

- **Opening Reception** (Monday, July 12)

  Adult Guest: $50.00  Child: $25.00

- **Poster Session Reception** (Wednesday, July 14)

  Adult Guest: $50.00  Child: $25.00

Proceedings in Hard Copy

Copies of the hardcopy proceedings are available for purchase in onsite registration, and will be mailed after the conference (late summer). The calculated shipping cost is approximate, and will be recalculated at the time of shipment. If different, you will be notified before shipment.

Special Conference Rate: $95.00 (normally $250.00)

Workshop Technical Report CD


Workshop Technical Report CD: $25.00
Proceedings of the Twenty-Fourth AAAI Conference on Artificial Intelligence

July, 2010
Atlanta, Georgia USA

3 vols., references, index, illus.,

Special Conference Price
$90.00 (plus shipping)

Special price available only to conference registrants. No other discounts may be applied. Orders must be placed and paid for on site.