

Twenty-Seventh AAAI Conference
on Artificial Intelligence (AAAI-13)

Twenty-Fifth Conference on Innovative
Applications of Artificial Intelligence (IAAI-13)

Fourth Symposium on Educational Advances
in Artificial Intelligence (EAAI-13)

July 14 – 18, 2013

*Hyatt Regency Bellevue on Seattle's Eastside
Bellevue, Washington, USA*



Sponsored by the
Association for the Advancement of Artificial Intelligence

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Conference Program

Contents

Acknowledgments / 3
Awards / 3–4
Banquet / 4
Competitions / 7
Conference at a Glance / 5
Doctoral Consortium / 4, 6
EAAI-13 Program / 4, 6
Exhibition / 24
General Information / 25
IAAI-13 Program / 8–21
Invited Presentations / 8–9
Late-Breaking Papers / 10–23
Poster Sessions / 4, 23
Puzzle Hunt / 4
Registration / 25
Special Events and Programs / 4–6, 23
Special Meetings / 7
Sponsoring Organizations / 2
Student Programs / 4, 23
Technical Program / 10–21
Tutorial Forum / 22
Workshop Program / 22

Sponsoring Organizations

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Acknowledgments

The Association for the Advancement of Artificial Intelligence acknowledges and thanks the AAAI 13 Conference Committee (previous page) for their generous contributions of time and energy to the successful creation and planning of the Twenty-Seventh AAAI Conference on Artificial Intelligence and the Twenty-Fifth Conference on Innovative Applications of Artificial Intelligence. (A complete listing of the AAAI-13, IAAI-13, and EAAI-13 Program Committee members appears in the conference proceedings.)

Awards

All AAAI-13, IAAI-13, and AAAI Special Awards will be presented Tuesday, July 16, 8:30 – 9:00 AM, in the Grand Ballroom on the 2nd floor of the Hyatt.

AAAI-13 Awards

The AAAI-13 Awards will be presented by Program Cochairs Marie desJardins and Michael Littman.

AAAI-13 Outstanding Paper Awards

HC-Search: Learning Heuristics and Cost Functions for Structured Prediction

Janardhan Rao Doppa, Alan Fern, Prasad Tadepalli

SMIL: Shuffled Multiple-Instance Learning

Gary Doran, Soumya Ray

Honorable Mention

On the Value of Using Group Discounts under Price Competition

Reshef Meir, Tyler Lu, Moshe Tennenholtz, Craig Boutilier

For outstanding technical quality and clarity of presentation

PAC Optimal Exploration in Continuous Space Markov Decision Processes

Jason Pazis, Ronald Parr

For outstanding formal analysis

Sensitivity of Diffusion Dynamics to Network Uncertainty

Abhijn Adiga, Chris Kuhlman, Henning S. Mortveit, Anil Kumar S. Vullikanti

For outstanding novelty of research question

Effective Bilingual Constraints for Semi-Supervised Learning of Named Entity Recognizers

Mengqiu Wang, Wanxiang Che, Christopher D. Manning

For outstanding engineering design

Outstanding Program Committee Members

Outstanding Senior Program Committee Members

Ariel Felner (Ben-Gurion University, Israel)

David Pynadath (USC Institute for Creative Technologies, USA)

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AAAI Keynote Address:

Grounded Language Learning

Raymond J. Mooney

(University of Texas at Austin)

Introduction by Marie desJardins

Tuesday, July 16, 9:00 AM – 10:00 AM



Most approaches to semantics in computational linguistics represent meaning in terms of words or abstract symbols. Grounded-language research bases the meaning of natural language on perception and/or action in the (real or virtual) world. Machine learning has become the most effective approach to constructing natural-language systems; however, current methods require a great deal of laboriously annotated training data. Ideally, a computer would be able to acquire language like a child, by being exposed to language in the context of a relevant but ambiguous environment, thereby grounding its

learning in perception and action. We will review recent research in grounded language learning and discuss future directions.

Raymond J. Mooney is a professor in the Department of Computer Science at the University of Texas at Austin. He received his Ph.D. in 1988 from the University of Illinois at Urbana/Champaign. He is an author of over 150 published research papers, primarily in the areas of machine learning and natural language processing. He was the president of the International Machine Learning Society from 2008–2011, program cochair for AAAI 2006, and is a AAAI and ACM Fellow. His recent research has focused on learning for natural-language processing, statistical relational learning, active transfer learning, and connecting language, perception and action.

Ashish Sabharwal (IBM Watson Research Center, USA)

AAAI-13 Computational Sustainability Best Paper Awards

The AAAI-13 Awards will be presented by Track Cochairs Doug Fisher and Carla Gomes. The awards are given in cooperation with Computing Community Consortium.

A Temporal Motif Mining Approach to Unsupervised Energy Disaggregation: Applications to Residential and Commercial Buildings

Huijuan Shao, Manish Marwah, Naren Ramakrishnan

Approximate Bayesian Inference for Reconstructing Velocities of Migrating Birds from Weather Radar

Daniel Sheldon, Andrew Farnsworth, Jed Irvine, Benjamin Van Doren, Kevin Webb, Thomas G. Dietterich, Steve Kelling

IAAI-13 Deployed Applications Awards

The five IAAI-13 Deployed Application Awards will be announced by the IAAI-13 Chair Hector Munoz-Avila and Cochair David Stracuzzi. Please see the schedule for paper titles. Certificates will be presented during paper sessions.

Robert S. Englemore Memorial Award and Lecture

The Robert S. Englemore Award is sponsored by IAAI-13 and *AI Magazine*, and will be presented by Hector Munoz-Avila and David Stracuzzi, IAAI-13 Chair and Cochair, and David B. Leake, Editor-in-Chief, *AI Magazine*. The award and lecture was established in 2003 to honor Dr. Englemore's extraordinary service to AAAI, *AI Magazine*, and the AI ap-

plications community, and his contributions to applied AI. The 2013 award will be presented to Deborah L. McGuinness (Rensselaer Polytechnic Institute) for leadership in semantic web research and in bridging AI and eScience, significant contributions to deployed AI applications, and extensive service to the AI community. The lecture will be held Wednesday, July 17, 10:20 AM, in Grand A on the 2nd Floor of the Hyatt.

AAAI Honors and Special Awards

AAAI Honors and Special Awards will be presented by Henry Kautz, Awards Committee Chair and AAAI Past President, Manuela Veloso, AAAI President, and Thomas Dietterich, AAAI President-Elect.

2013 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 2013, who will be honored during the annual Fellows dinner on Tuesday, July 16:

Bonnie Dorr (University of Maryland)

Tim Finin (University of Maryland, Baltimore County)

Lise Getoor (University of Maryland)

Sven Koenig (University of Southern California)

Lillian Lee (Cornell University)

Gerald J. Tesaro (IBM TJ Watson Research Center)

Mirosław Trzuszczynski (University of Kentucky)

Qiang Yang (Hong Kong University of Science and Technology)

AAAI-13 Social Events

Opening Reception

The AAAI-13 Opening Reception will be held Monday, July 15, 6:00 – 7:00 PM in the Grand Ballroom of the Hyatt. This event will provide the traditional opportunity for attendees to socialize in a relaxed setting prior to the first day of technical sessions. A variety of hors d'oeuvres and a nohost bar will be available. Admittance to the reception is free to AAAI-13 technical registrants. A \$60.00 per person fee (\$30.00 for children) will be charged for spouses and other nontechnical conference registrants. The reception will be followed immediately by the AI Video Competition award ceremony, and at 8:00 PM by the IAAI-13 Invited Talk by Larry Hunter in Evergreen Ballroom A.

AAAI-13 Poster Session Reception

A poster session featuring Student Abstracts, Doctoral Consortium Abstracts, EAAI-13 posters, and Poker Competition posters will be held on Tuesday, July 16, 5:45 – 7:30 PM in the Evergreen Ballroom, Lobby Level. (For a complete listing of posters, please refer to page 23.) The accompanying reception will include a light reception and a nohost bar. Admittance to the reception is free to AAAI-13 registrants. A \$50.00 per person fee (\$25.00 for children) will be charged for spouses and other nontechnical conference registrants.

NEW! AAAI Puzzle Hunt

Tuesday, July 16, 8:00 PM – 10:00 PM
Evergreen A/B, Lobby Level

Come join us for an AI-themed puzzle hunt! Participants will group themselves into teams and solve a set of paper-and-pencil puzzles together. Puzzles include variants of crosswords, trivia-based, and logic-based puzzles. The first team to answer the “meta puzzle” that draws on the answers to all the other puzzles wins a modest prize.

AAAI-13 Banquet

The AAAI-13 Banquet will be held Wednesday evening, July 17, 7:00 PM – 10:00 PM at the Bellevue Arts Museum (BAM), 510 Bellevue Way NE, Bellevue, a short 10-minute walk from the Hyatt. Directions will be available in onsite registration. BAM serves as the Pacific Northwest's center for art, craft and design, with an emphasis on Northwest artists. The banquet fee includes one complimentary beverage, and a three-course, sit-down dinner with wine. Access to the galleries will be available after dinner. A limited number of tickets are available in onsite registration for \$150.00 per person.

AAAI-13 Student Programs

AAAI-13 Pre-PhD Student Abstract and Poster Program

This program provides a forum in which students can present and discuss their work during its early stages, meet some of their peers who have related interests, and introduce themselves to more senior members of the field. The Student Poster session will be held Tuesday, July 16, 5:45 – 7:30 PM in Evergreen Ballroom, Lobby Level.

AAAI/SIGART Doctoral Consortium (DC-13)

The DC schedule appears on page 6.

The Eighteenth AAAI/SIGART Doctoral Consortium program will be held on Sunday and Monday, July 14 – 15, in Evergreen, Lobby Level. 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 sixteen students accepted to participate in this program will also participate in the AAAI-13 evening Poster Session on Wednesday, July 17. All interested AAAI-13 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, Microsoft Research, and David E. Smith, which provide partial funding for this event. Please refer to www.dcs.kcl.ac.uk/staff/mcburney/aaai2013-dc.htm for complete details.

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. Sign-up sheets are available at the onsite registration desk in the Hyatt. Students should meet their designated Fellow in onsite registration on their assigned day.

Senior Member Recognition

AAAI is pleased to announce the 2013 AAAI senior members, who are being recognized for their long-term participation in AAAI and their distinction in the field of artificial intelligence.

Nestor Rychtyckyj (Ford Motor Company, USA)

R. Michael Young (North Carolina State University, USA)

Classic Paper Award

The 2013 AAAI Classic Paper award honors the following authors of paper(s) deemed most influential from the Twelfth National Conference on Artificial Intelligence, held in 1994 in Seattle, Washington, USA.

Award-winning authors will present talks on Wednesday, July 17, at 10:20 and 10:35, Evergreen Ballroom B, Lobby Level.

A Filtering Algorithm for Constraints of Difference in CSPs

Jean-Charles Régin

For groundbreaking contributions to constraint programming via the development of one of the first propagators for global constraints.

Acting Optimally in Partially Observable Stochastic Domains

Anthony R. Cassandra, Leslie Pack Kaelbling and Michael L. Littman

For significant contributions to the application of POMDP models in AI and to practical algorithms for their solution.

Distinguished Service Award

The AAAI Distinguished Service award recognizes one individual each year for extraordinary service to the AI community. The 2013 recipient is Ted E. Senator, SAIC, Inc., for his sustained service to AAAI as a driving force behind the IAAI conference, as the secretary-treasurer for the society, and through his role in securing funding for AI research.

2013 Feigenbaum Prize

The AAAI Feigenbaum Prize was established to recognize and encourage outstanding artificial intelligence research advances that are made by using experimental methods of computer science. The 2013 prize is being awarded to the IBM Watson team for demonstrating that a synthesis of AI techniques, including symbolic knowledge representation, natural language understanding, and statistical machine learning, can achieve human-level performance in real-time factual question-answering. The Feigenbaum Prize is supported by a grant from the Feigenbaum Nii Foundation.

AAAI-13 Affiliated Events

The Fourth Symposium on Educational Advances in AI (EAAI-13)

Monday – Tuesday, July 15–16
Auditorium, 3rd Floor

The EAAI-13 schedule appears on page 6.

EAAI-13 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 em-

Morning	AFTERNOON	EVENING
<p>Tutorial Forum Workshops AAAI/SIGART DC</p>	<p>Sunday, July 14</p> <p>Tutorial Forum Workshops AAAI/SIGART DC</p>	
<p>Tutorial Forum Workshops AAAI/SIGART DC EAAI-13 (Klein Talk) Trading Agent Competition</p>	<p>Monday, July 15</p> <p>AAAI Business Meeting Tutorial Forum Workshops AAAI/SIGART DC EAAI-13</p>	<p>Opening Reception AI Video Competition IAAI Invited Talk: Hunter</p>
<p>AAAI / IAAI Opening Ceremony / Awards and Honors AAAI Keynote: Mooney AAAI/IAAI Joint Talk: Birnbaum EAAI-13 (Matuszek Talk) Senior Member / Spotlight Papers Late-Breaking Paper Spotlights General Game Playing Competition Trading Agent Competition</p>	<p>Tuesday, July 16</p> <p>AAAI Talk: Kumar AAAI-13/IAAI-13/EAAI-13 Technical/LBP Poster Session General Game Playing Competition Trading Agent Competition Senior Member / Spotlight Papers</p>	<p>Poster Reception (Students, EAAI, Poker) AAAI Puzzle Hunt Fellows Dinner Trading Agent Competition</p>
<p>AAAI Talk: Bennett IAAI RSE Talk: McGuinness Senior Member / Spotlight Papers Late-Breaking Paper Spotlight General Game Playing Competition</p>	<p>Wednesday, July 17</p> <p>AAAI Talk: Sandholm AAAI-13/IAAI-13 Senior Member / Spotlight Papers Technical/LBP Poster Session General Game Playing Competition AAAI Panel: Reviewing</p>	<p>AAAI-13 Banquet</p>
<p>AAAI Talk: Mataric IAAI Talk: Rychtyckj/Yang Senior Member / Spotlight Papers</p>	<p>Thursday, July 17</p> <p>AAAI-13/IAAI-13 Technical/LBP Poster Session Senior Member / Spotlight Papers</p>	

EAAI-13 Technical Schedule

EAAI sessions will be held in the Auditorium, Third Floor

Monday, July 15

9:30 AM – 10:30 AM

Welcome

David Kauchak, EAAI-13 Chair

EAAI-13 Invited Talk:

Learning in the Lab at Midnight:

Experiences from Teaching AI at Berkeley and Online

Dan Klein (University of California, Berkeley)

Where does learning really happen? Only a little happens in lecture; most students learn much more working with friends in the lab at midnight. The modern student experience increasingly revolves around coursework, peer assistance, and asynchronous interactions — not lectures, textbooks, and office hours. With these trends only increasing as enrollments rise and online channels emerge, how should we design our AI courses?

I'll talk about the best answers we've found so far for the Berkeley AI course. One key component of our approach is a set of thematically coherent, autograded projects that engage students and integrate with lectures in an ongoing way. More generally, I'll focus on several questions that have shaped our course, including: What should the role of a modern lecture be? What's the balance between cooperative learning and competition? When is an autograder more useful than a human TA? Why are students even taking AI in the first place? Finally, I'll talk about how technology that we originally developed for pedagogical purposes, such as rich auto-grading, has helped the course scale from tens to hundreds of students on campus and now to tens of thousands online.

Our experiences have resulted in a large number of reusable materials, which we're always excited to share. I'll conclude with a discussion of how other instructors can take advantage of our lectures, interactive assignments, and autograded projects, which have already been used by over a hundred AI courses.

11:00 AM – 11:45 AM

Paper Session

Learning about Representational Modality: Design and Programming Projects for Knowledge-Based AI

Ashok K. Goel, Maithilee Kunda, David Joyner, Swaroop Vattam

SEPIA: A Scalable Game Environment for Artificial Intelligence Teaching and Research

Scott Sosnowski, Tim Ernsberger, Feng Cao, Soumya Ray

1:45 PM – 2:30 PM

Model AI Assignments Session

Model AI Assignment: Recreating TD-Gammon

Devika Subramanian

Model AI Assignment: An Introduction to Counterfactual Regret Minimization

Todd W. Neller, Marc Lanctot

Tsunami Warning System: A Case Study of Intelligent Agents in Action

Stephanie E. August

2:30 PM – 3:30 PM

Panel:

Educational Repositories for Teaching AI

Panelists: Ed Fox, Lois Delcambre, Todd Neller

4:00 PM – 5:00 PM

Poster Spotlights and Open Mic

Poster:

"Paradigms of AI Programming" in Python

Daniel Connelly, Ashok K. Goel

Poster:

Student-Friendly Java-Based Multiagent Event Handling

Dan Tappan

Lightning Talks

Open microphone presentations

Tuesday, July 16

11:30 AM – 12:30 PM

EAAI-13 Invited Talk

Broader and Earlier Access to Machine Learning

Paula Matuszek (Villanova University)

In a world of big data, everyone needs machine learning. How do we teach it to everyone? At Villanova we have embarked on an NSF-funded project to develop a set of machine-learning modules for students from a wide variety of domains. Our goal is to have students who can make intelligent and effective use of appropriate machine learning algorithms and techniques as tools. In this talk I will describe our grant and share the state of the modules we have so far, in order to stimulate discussion about how we can teach machine learning more broadly.

1:45 PM – 2:45 PM

Teaching and Mentoring Session 1

2:45 PM – 3:45 PM

Teaching and Mentoring Session 2

4:15 PM – 4:45 PM

Senior Member Presentation:

Meeting the Responsibility to Explain AI

Bruce Buchanan

4:45 PM – 5:45 PM

Panel Teaching Challenges

5:45 PM – 7:30 PM

AAAI-13 Student/EAAI/Poker Poster Session

Doctoral Consortium Technical Schedule

Sunday, July 14

9:00 AM – 9:40 AM

Introduction

9:40 AM – 10:20 AM

Daniel Bauer

10:50 AM – 11:30 AM

Adrian Ratter

11:30 AM – 12:10 PM

Mariana Mendoza

1:40 PM – 2:20 PM

Brent Harrison

2:20 PM – 3:00 PM

Matthew Hatem

3:10 PM – 4:00 PM

Shekhar Gupta

4:00 PM – 4:40 PM

Sviatlana Danilava

7:00 PM

DC Dinner: Tap House Grill, Bellevue

Monday, July 15

9:00 AM – 9:40 AM

Daniel Schlegel

9:40 AM – 10:20 AM

Timothy Wiley

10:50 AM – 11:30 AM

Anastasia Paparrizou

11:30 AM – 12:10 PM

Alessandro Panella

1:40 PM – 2:20 PM

Walter Lasecki

2:20 PM – 3:00 PM

Gary Doran

3:10 PM – 4:00 PM

Ying Zhu

4:00 PM – 4:40 PM

Christopher Wilt

4:40 PM – 5:20 PM

Johannes Fichte

phasis 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-13 features a technical program, a poster program as part of the poster reception on Tuesday evening, and a “Model AI” session highlighting innovative, ready-to-adopt materials. EAAI-13 is included in the AAAI-13 technical registration fee, but an EAAI-13 only registration option is also available.

AI Video Competition Awards

Monday, July 15, 7:00 – 8:00 PM
Grand Ballroom, 2nd Floor.

The Seventh AI Video Competition (www.aivideo.org) Awards Ceremony will be held immediately after the opening reception. Authors of award-winning videos will be presented with “Shakey” trophies that honor SRI’s Shakey robot and its pioneering video. Award winning videos will be screened at the ceremony.

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 cochairs Marco Dorigo, Mauro Birattari, and Rehan O’Grady, all of IRIDIA, Université Libre de Bruxelles. Awards will be presented in the following categories: Best Video, Best Student Video, and Most Entertaining Video. AAAI gratefully acknowledges the generous contribution of the *AI Journal* Review Board for its donation and the DMRC of the University of Paderborn, Germany, for help with the manufacturing of the awards.

Computer Poker Competition

Tuesday, July 16, 5:45 – 7:30 PM
Poster Session, Evergreen Ballroom, Lobby Level

The AAAI Annual Computer Poker Competition, now in its eighth year, showcases state-of-the-art intelligent programs for playing poker. The poker variants considered in the 2013 competition will consist of three variants of Texas Hold’em poker — two-player (heads-up) with both limit and no-limit betting structures, and three-player limit. With many interesting challenges in all three categories, we expect this year’s competition to continue to spur the development of new techniques for playing large games of imperfect information.

The accompanying 2013 Computer Poker Workshop (W4) that will take place on Sunday, July 14 at AAAI will provide a forum where researchers studying Computer Poker and other games of imperfect information can share current research and gather ideas about how to improve the state of the art and advance AI research in these areas. In recent years, poker has emerged as an important, visible challenge problem for the field of AI. Just as the development of world-class chess-playing programs was considered an important milestone in the development of intelligent computing, poker is increasingly being seen in the same way. Several important features differentiate poker from other games: the presence of imperfect information (due to hidden cards), stochastic events, and the desire to

Special Meetings

AAAI Business Meeting

The AAAI Annual Business Meeting will be held Monday, July 15, 1:15 – 1:45 PM, Evergreen A, Lobby Level

AAAI Conference Committee Meeting

AAAI Conference Committee Meeting will be held Wednesday, July 17, 7:45 – 8:45 AM, Maple, 3rd Floor

AAAI Executive Council Meeting

The AAAI Executive Council Meeting will be held Monday, July 15, 9:00 AM – 4:00 PM, Cedar, 2nd Floor. Continental breakfast will be available at 8:30 AM.

AAAI Publications Committee Meeting

The AAAI Publications Committee Meeting will be held Tuesday, July 16, 12:30 PM – 2:00 PM.

AI Magazine Editorial Board Meeting

The *AI Magazine* Editorial Board Meeting will be held Wednesday, July 17, 12:30 – 2:00 PM, Executive Boardroom, 3rd Floor.

JAIR Editorial Board Meeting

The *JAIR* Editorial Board Meeting will be held Tuesday, July 16, 12:30 – 2:00 PM, Wild Ginger Bellevue, 11020 NE 6th St. Ste 90.

maximize utility instead of simply winning. Hence, traditional AI game-playing techniques do not apply and novel methods are required. The Computer Poker Workshop will consist of a series of oral presentations, followed by a poster session and discussion. The results of the 2013 AAAI Annual Computer Poker Competition will also be announced during the workshop. Some poster authors will also present their work at the AAAI-13 poster reception on Tuesday evening, July 16.

AAAI thanks Poker Competition cochairs Neil Burch and Eric Jackson for all their efforts in making this event possible, as well as David Parkes, who serves as the impartial “arbiter” for the competition. AAAI also gratefully acknowledges the generous sponsorship of Steve Kuhn of Pine River Capital.

14th Annual Trading Agent Competition (TAC 2013)

July 15: Collocated AAAI TADA Workshop
July 16: Grand Ballroom Foyer, 2nd Floor, Hyatt

The Trading Agent Competition is an international forum aiming to encourage and promote high quality research in the technology underlying trading agents. The competition has been held annually since 2000 and has attracted participants from multiple institutions worldwide. This year TAC is collocated with AAAI and its workshop TADA (the Workshop on Trading Agents Design and Analysis) will be held on Monday July 15. The semifinals and finals of TAC will take place on July 15 and 16. The competition will involve two scenarios:

Power TAC

Sustainable energy systems of the future will need more than efficient, clean, low-cost, renewable energy sources; they will also need efficient price signals that motivate sustainable energy consumption

as well as a better real-time alignment of energy demand and supply. In Power TAC, agents act as retail brokers in a local power distribution region, purchasing power from a wholesale market as well as from local sources, such as homes and businesses with solar panels, and selling power to local customers and into the wholesale market. Retail brokers must solve a supply-chain problem in which the product is infinitely perishable, and supply and demand must be exactly balanced at all times.

TAC Ad Auctions

In the TAC/AA game, agents representing Internet advertisers bid for search-engine ad placement over a range of interrelated keyword combinations. A back-end search-user model translates placement over each simulated day to impressions, clicks, and sale conversions, yielding revenue for the advertiser. Advertiser strategies combining online data analysis and bidding tactics compete to maximize profit over the simulated campaign horizon.

AAAI Eighth Annual General Game Playing Competition

Tuesday – Wednesday, July 16 – 17
Grand Ballroom Foyer, 2nd Floor

This year’s General Game Playing 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 Tuesday, July 16, players will participate in preliminary rounds. On Wednesday, July 17, the top four finishers from the preliminary rounds will participate in semifinal and final rounds to determine an overall winner.) See games.stanford.edu for details. After the competition, as in past years, the winning program will be pitted against a human in a best-of-three carbon-vs-silicon match.

AAAI-13 / IAAI-13 Invited / Spotlight Track Presentations

All AAAI-13 and IAAI-13 Invited Talks, July 14 – 16 will be held in Grand Ballroom A, Second Floor, unless otherwise noted. (EAAI-13 Invited Speakers are listed on page 6.)

Monday, July 15

8:00 PM – 9:00 PM

IAAI-13 Invited Talk:

Building a Mind for Life

Lawrence Hunter (University of Colorado)

Introduction by Hector Munoz-Avila

Evergreen Ballroom A



Sometimes two hard problems are easier than one. Making sense of the explosion to data about life and human health that arises from exponentially improving DNA sequencing technology is one of the primary scientific challenges of our time. Artificial Intelligence is based in the equally profound question of what constitutes a mind and how one could be constructed artificially. These two challenges mutually inform and constrain each other. Computational Biology needs tools that relate enormous experimental results to vast amounts of relevant prior knowledge in ways that illuminate the mechanisms underlying the phenomena under study. This is a fundamentally semantic process that requires programs represent complex, incomplete and partially incorrect knowledge, reason about it and its relation to experimental results, and engage in effective, ongoing scientific communication about hypotheses. This is an “AI-complete” problem. However, the domain is special in several ways: (1) All the relevant knowledge is explicit, and can be found in the roughly 10,000 textbooks and 20 million journal articles that make up the biomedical literature. (2) The biomedical research community has a long-standing and effective project in ontology development, provide an increasingly comprehensive conceptual foundation of entities, processes, functions, locations, relations and more that are explicitly defined, rigorously organized and maintained by domain experts. These biomedical ontologies underpin several large-scale annotation projects, the results of which are available in standardized semantic formats like RDF and OWL. (3) There is a large community of biomedical research scientists desperate for effective means of explaining and contextualizing their data. Although they are demanding and less interested in the technological means than the scientific ends, a thoughtful human community eager to interact in an extended intellectual partnership with programs is a rare and valuable resource for AI research. This combination of factors suggests that the first wildly acknowledged genuine AI may think about biology. I will talk about progress to date and prospects in building a mind for life.

Tuesday, July 16

8:30 AM – 9:00 AM

AAAI-13 / IAAI-13 Opening Ceremony

AAAI Welcome and Award Presentations

Michael Littman and Marie desJardins, AAAI-13 Program Cochairs

Doug Fisher and Carla Gomes for Computational Sustainability Paper Awards

IAAI Welcome and Award Presentations

Hector Munoz-Avila, IAAI-13 Conference Chair; David Stracuzzi, IAAI-13 Program Cochair, and David Leake, AI Magazine Editor-in-Chief

AAAI Special Awards: Fellows Announcement, Senior Member Recognition, AAAI Classic Paper Awards, Distinguished Service Award, Feigenbaum Prize

Henry Kautz, AAAI Past President and Awards Committee Chair; Manuela Veloso, AAAI President; and Thomas Dietterich, AAAI President-Elect

9:00 AM – 10:00 AM

AAAI Keynote Address:

Grounded Language Learning

Raymond J. Mooney (University of Texas at Austin)

Introduction by Marie desJardins

(For description, see page 3.)

10:20 AM – 11:20 AM

AAAI-13/IAAI-13 Joint Invited Talk:

Telling Stories at Internet Scale

Larry Birnbaum (Northwestern University)

Introduction by Marie desJardins



Taking full advantage of the massive scale of “big data” will require technologies for analyzing and communicating these data to people, in terms they can understand and act on, at an equally massive scale. The automatic generation of narratives from data offers the promise of meeting this critical need. Our technology, which leverages human editorial judgment at scale, is today generating millions of stories from data, including highly personalized stories, in domains varying from business operations, to sports, education, medicine, and finance. The resulting narratives are often indistinguishable from those written by human analysts and writers.

1:45 PM – 2:45 PM

AAAI-13 Invited Talk:

Aerial Robot Swarms

Vijay Kumar (University of Pennsylvania)

Introduction by Michael Littman



Autonomous micro aerial robots can operate in three-dimensional unstructured environments, and offer many opportunities for environmental monitoring, search and rescue, and first response. I will describe the challenges in developing small, agile robots and our recent work in the areas of (a) control and planning, (b) state estimation and mapping, and (c) coordinating large teams of robots, with applications to cooperative manipulation and transport, construction, and exploration and mapping.

Wednesday, July 17

9:00 AM – 10:00 AM

AAAI-13 Invited Talk:

Fighting the Tuberculosis Pandemic Using Machine Learning

Kristin P. Bennett and the TB-Insight Team (Rensselaer Polytechnic Institute)

Introduction by Marie desJardins



Tuberculosis (TB) infects one third of the world's population and is the second leading cause of death from a single infectious agent worldwide. The emergence of drug resistant TB remains a constant threat. We examine how machine learning methods can help control tuberculosis. DNA fingerprints of *Mycobacterium tuberculosis* complex bacteria (Mtb) are routinely gathered from TB patient isolates for every tuberculosis patient in the United States to support TB tracking and control efforts. We develop learning models to predict the genetic lineages of Mtb based on DNA fingerprints. Mining of tuberculosis patient surveillance data with respect to these genetic lineages helps discover outbreaks, improve TB control, and reveal Mtb phenotype differences. We discuss learning- and visualization-based tools to support public health efforts towards TB control in development for the New York City Health Department.

Wednesday, July 17, 10:20 – 11:20 AM

Robert S. Engelmore Award Lecture:

Giving Data a Voice



Deborah L. McGuinness (Rensselaer Polytechnic Institute)
Introduction by David Leake (AI Magazine)

As data explodes on the web and as interest increases in using data to inform decisions, it becomes increasingly important to be able to “converse” with data. This talk will look at some techniques for interacting with data to create smart and actionable applications. I will highlight usage of semantic approaches to improve discovery, integration, visualization, and explanation. I will attempt to highlight promising directions, needs, and potential for future data exploration settings where users and data may enter into collaborative investigations.

1:45 – 2:45 PM

AAAI-13 Invited Talk:

Poker AI: Algorithms for Creating Game-Theoretic Strategies for Large Incomplete-Information Games



Tuomas Sandholm (Carnegie Mellon University)
Introduction by Michael Littman

Incomplete-information games — such as most auctions, negotiations, and future (cyber)security settings — cannot be solved using minimax search even in principle. Completely different algorithms were needed. A dramatic scalability leap has occurred in our ability to solve such games over the last seven years, fueled largely by the Annual Computer Poker Competition. I will discuss the key domain-independent techniques that enabled this leap, including automated abstraction techniques and approaches for mitigating the issues that they raise, new equilibrium-finding algorithms, safe opponent exploitation methods, techniques that use qualitative knowledge as an extra input, and endgame solving techniques. I will finish by benchmarking poker programs against the best human poker professionals and by discussing what humans can learn from the programs.

4:45 – 5:45 PM

AAAI-13 Panel:

Conference Reviewing: Best Practices

Marie desJardins and Michael Littman, AAAI-13 Program Cochairs

Thursday, July 18

9:00 – 10:00 AM

AAAI-13 Invited Talk:

Socially Assistive Robotics: Human-Robot Interaction Methods for Creating Robots that Care

Maja J. Mataric (University of Southern California)
Introduction by Michael Littman



Socially assistive robotics (SAR) is a new field of intelligent robotics that focuses on developing machines capable of assisting users through social rather than physical interaction. The robot's physical embodiment is at the heart of SAR's effectiveness, as it leverages the inherently human tendency to engage with lifelike (but not necessarily humanlike or otherwise biomimetic) social behavior. People readily ascribe intention, personality, and emotion to robots; SAR leverages this engagement stemming from noncontact social interaction involving speech, gesture, movement demonstration and imitation, and encouragement, to develop robots capable of monitoring, motivating, and sustaining user activities and improving human learning, training, performance and health outcomes. Human-robot interaction (HRI) for SAR is a growing multifaceted research area at the intersection of engineering, health sciences, neuroscience, social, and cognitive sciences. This talk will describe our research into embodiment, modeling and steering social dynamics, and long-term user adap-

tation for SAR. The research will be grounded in projects involving analysis of multimodal activity data, modeling personality and engagement, formalizing social use of space and nonverbal communication, and personalizing the interaction with the user over a period of months, among others. The presented methods and algorithms will be validated on implemented SAR systems evaluated by human subject cohorts from a variety of user populations, including stroke patients, children with autism spectrum disorder, and elderly with Alzheimers and other forms of dementia.

10:20 AM – 11:20 AM

IAAI-13 Invited Talk:

Applying AI to Vehicle Failure Monitoring for Autonomous Vehicle Durability Testing

Howie (Hao) Yang and Nestor Rychtycky (Ford Motor Company)
Introduction by David Stracuzzi



Recently Ford Motor Company has deployed autonomous testing vehicles for automated driving at the Michigan Proving Grounds. These nonproduction (prototype) vehicles are used for durability testing over a variety of extreme terrain and conditions that are very difficult on human drivers. A vehicle with autonomous driving capability can be driven over the same difficult terrain numerous times at a consistent rate of speed. However, the ability of the human driver to detect issues with the car during these tests is still a major requirement. In this talk we will discuss the development and deployment of an AI-based system that is used to monitor the vehicle for any mechanical failures. This system processes signals from a variety of different in-vehicle sensors that provide data about the vehicle performance during each test run. The AI system analyzes the data and sends messages to the vehicle tracking center if any issues occur with the vehicle and the operator at the tracking center can stop the vehicle to prevent any potential damage. Various factors such as noise, vibration, speed, torque are all used by the system and the necessary knowledge to reason with data on a real-time basis that decides what information needs to be sent to the control center is all incorporated into the system. This application shows how AI technology can be integrated into a real-world system that provides tangible benefits for both Ford and its customers.



GRAND BALLROOM A

GRAND BALLROOM E

GRAND BALLROOM F

GRAND BALLROOM G

8:30 – 9:00 AM

AAAI-13 / IAAI-13 Opening Ceremony

AAAI Welcome and Award Presentations (*Michael Littman and Marie desJardins, AAAI-13 Program Cochairs*)
 Computational Sustainability Paper Awards (*Doug Fisher and Carla Gomes*)
 IAAI Welcome and Award Presentations (*Hector Munoz-Avila, IAAI-13 Conference Chair; David Stracuzzi, IAAI-13 Program Cochair, and David Leake, AI Magazine Editor-in-Chief*)
 AAAI Special Awards: Fellows Announcement, Senior Member Recognition, AAAI Classic Paper Awards, Distinguished Service Award, Feigenbaum Prize (*Henry Kautz, AAAI Past President and Awards Committee Chair; Manuela Veloso, AAAI President; and Thomas Dietterich, AAAI President-Elect*)

9:00 – 10:00 AM

AAAI-13 Keynote Address

Grounded Language Learning
Raymond Mooney (University of Texas at Austin)

COFFEE BREAK, 10:00 – 10:20 AM

10:20 – 11:20 AM

AAAI-13/IAAI-13 Joint Invited Talk

Telling Stories at Internet Scale
Larry Birnbaum (Northwestern University)

11:20 AM – 12:20 PM

AAAI-13:
 Regression

Time-Dependent Trajectory Regression on Road Networks via Multi-Task Learning
Jiangchuan Zheng, Lionel M. Ni

A Concave Conjugate Approach for Non-convex Penalized Regression with the MCP Penalty
Shubao Zhang, Hui Qian, Wei Chen, Zhihua Zhang

Lazy Gaussian Process Committee for Real-Time Online Regression
Han Xiao, Claudia Eckert

Continuous Conditional Random Fields for Efficient Regression in Large Fully Connected Graphs
Kosta Ristovski, Vladan Radosavljevic, Slobodan Vucetic, Zoran Obradovic

AAAI-13:
 Sentiment and Recommendation

The Automated Acquisition of Suggestions from Tweets
Li Dong, Furu Wei, Yajuan Duan, Xiaohua Liu, Ming Zhou, Ke Xu

A Hierarchical Aspect-Sentiment Model for Online Reviews
Suin Kim, Jianwen Zhang, Zheng Chen, Alice Oh, Shixia Liu

A Pattern Matching Based Model for Implicit Opinion Question Identification
Hadi Amiri, Zheng-Jun Zha, Tat-Seng Chua

From Semantic to Emotional Space in Probabilistic Sense Sentiment Analysis
Mitra Mohtarami, Man Lan, Chew Lim Tan

AAAI-13:
 Markets and Preferences

Instructor Rating Markets
Mithun Chakraborty, Sanmay Das, Allen Lavoie, Malik Magdon-Ismael, Yonatan Naiman

How to Cut a Cake Before the Party Ends
David Kurokawa, John K. Lai, Ariel D. Procaccia

Online Lazy Updates for Portfolio Selection with Transaction Costs
Puja Das, Nicholas Johnson, Arindam Banerjee

Abstract Preference Frameworks — A Unifying Perspective on Separability and Strong Equivalence
Wolfgang Faber, Miroslaw Trzuszczynski, Stefan Woltran

12:20 – 12:30 PM

Late-Breaking Papers

Predicting Professions through Probabilistic Model under Social Context
Ming Shao, Liangyue Li, Yun Fu

Algorithm Selection in Bilateral Negotiation
Litan Ilany, Ya'akov (Kobi) Gal

RAProp: Ranking Tweets by Exploiting the Tweet/User/Web Ecosystem and Inter-Tweet Agreement
Srijith Ravikummar, Kartik Talamadupula, Raju Balakrishnan, Subbarao Kambhampati

Learning CP-net Preferences Online from User Queries
Joshua T. Guerin, Thomas E. Allen, Judy Goldsmith

Take or Wait? Learning Turn-Taking from Multiparty Data
Iolanda Leite, Hannaneh Hajishirzi, Sean Andrist, Jill F. Lehman

Late-Breaking Papers

Fast, Near-Optimal Computation for Multi-Robot Path Planning on Graphs
Jingjin Yu, Steven M LaValle

Uncertainty Reduction for Active Image Clustering via a Hybrid Global-Local Uncertainty Model
Caiming Xiong, David M. Johnson, Jason J. Corso

Towards Joint Inference for Complex Ontology Matching
Christian Meilicke, Jan Noessner, Heiner Stuckenschmidt

AMRec: An Intelligent System for Academic Method Recommendation
Shanshan Huang, Xiaojun Wan, Xuewei Tang

An Ensemble of Linearly Combined Reinforcement-Learning Agents
Vukosi Marivate, Michael Littman

Late-Breaking Papers

Learning Tractable Graphical Models Using Mixture of Arithmetic Circuits
Amirmohammad Rooshenas, Daniel Lowd

The Value of Ignorance about the Number of Players
Noga Alon, Reshef Meir, Moshe Tennenholtz

Chance-Constrained Strong Controllability of Temporal Plan Networks with Uncertainty
Pedro H. R. Q. A. Santana, Brian C. Williams

A Novel Human Computation Game for Critique Aggregation
Claudio Cristian Musat, Boi Faltings

LUNCH, 12:30 – 1:45 PM

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
8:30 – 9:00 AM				
9:00 – 10:00 AM				
COFFEE BREAK, 10:00 – 10:20 AM				
10:20 – 11:20 AM				
11:20 AM – 12:20 PM	<p>AAAI-13: Bayesian Inference and Causality</p> <p>Reduce and Re-Lift: Bootstrapped Lifted Likelihood Maximization for MAP <i>Fabian Hadiji, Kristian Kersting</i></p> <p><i>m</i>-Transportability: Transportability of Causal Effect from Multiple Environments <i>Sanghack Lee, Vasant Honavar</i></p> <p>RockIt: Exploiting Parallelism and Symmetry for MAP Inference in Statistical Relational Models <i>Jan Noessner, Mathias Niepert, Heiner Stuckenschmidt</i></p> <p>Causal Transportability with Limited Experiments <i>Elias Bareinboim, Judea Pearl</i></p>	<p>AAAI-13 (Cognitive Systems): Knowledge-Based Systems</p> <p>Graph Traversal Methods for Reasoning in Large Knowledge-Based Systems <i>Abhishek Sharma, Kenneth D. Forbus</i></p> <p>Automatic Extraction of Efficient Axiom Sets from Large Knowledge Bases <i>Abhishek Sharma, Kenneth D. Forbus</i></p> <p>Preemptive Strategies for Overcoming the Forgetting of Goals <i>Justin Li, John Laird</i></p> <p>Learning to Efficiently Pursue Communication Goals on the Web with the GOSMR Architecture <i>Kevin Gold</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>SOCS: What's Hot <i>Wheeler Ruml</i></p> <p>SOCS: Challenges <i>Rob Holte</i></p> <p>AAMAS: Challenges <i>Gal Kaminka</i></p> <p>SDM: Best Paper: Triadic Measures on Graphs: The Power of Wedge Sampling <i>C. Seshadhri</i></p>	<p>IAAI-13: Deployed Application of Machine Learning</p> <p><i>Deployed: An Antimicrobial Prescription Surveillance System that Learns from Experience</i> <i>Mathieu Beaudoin, Froduald Kabanza, Vincent Nault, Louis Valiquette</i></p> <p><i>Deployed: GRADE: Machine Learning Support for Graduate Admissions</i> <i>Austin Waters, Risto Miikkulainen</i></p>
12:20 – 12:30 PM	<p>Late-Breaking Papers</p> <p>Throwing Darts: Random Sampling Helps Tree Search When the Number of Short Certificates Is Moderate <i>John P. Dickerson, Tuomas Sandholm</i></p> <p>A Formal Framework for the Specification, Verification and Synthesis of Diagnoser <i>Marco Bozzano, Alessandro Cimatti, Marco Gario, Stefano Tonetta</i></p> <p>Scaling-Up Quadratic Programming Feature Selection <i>Yamuna Prasad, K. K. Biswas, Parag Singla</i></p> <p>Cotraining Based Bilingual Sentiment Lexicon Learning <i>Dehong Gao, Furu Wei, Wenjie Li, Xiaohua Liu, Ming Zhou</i></p> <p>Adversarial Cooperative Path-Finding: A First View <i>Marika Ivanová, Pavel Surynek</i></p>			
LUNCH, 12:30 – 1:45 PM				

	GRAND BALLROOM A	GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
1:45 – 2:45 PM	<p>AAAI-13 Invited Talk: Aerial Robot Swarms <i>Vijay Kumar (University of Pennsylvania)</i></p>			
2:45 – 3:45 PM		<p>AAAI-13: Clustering Smart Multi-Task Bregman Clustering and Multi-Task Kernel Clustering <i>Xianchao Zhang, Xiaotong Zhang</i></p> <p>Spectral Rotation versus K-Means in Spectral Clustering <i>Jin Huang, Feiping Nie, Heng Huang</i></p> <p>Unsupervised Cluster Matching via Probabilistic Latent Variable Models <i>Tomoharu Iwata, Tsutomu Hirao, Naonori Ueda</i></p> <p>Clustering with Complex Constraints — Algorithms and Applications <i>Weifeng Zhi, Xiang Wang, Buyue Qian, Patrick Butler, Naren Ramakrishnan, Ian Davidson</i></p>	<p>AAAI-13: Reinforcement Learning Multi-Armed Bandit with Budget Constraint and Variable Costs <i>Wenkui Ding, Tao Qin, Xu-Dong Zhang, Tie-Yan Liu</i></p> <p>Basis Adaptation for Sparse Nonlinear Reinforcement Learning <i>Sridhar Mahadevan, Stephen Giguere, Nicholas Jacek</i></p> <p>Pruning for Monte Carlo Distributed Reinforcement Learning in Decentralized POMDPs <i>Bikramjit Banerjee</i></p> <p>Structured Kernel-Based Reinforcement Learning <i>Branislav Kveton, Georgios Theodorou</i></p>	<p>AAAI-13: Recognition and Detection Incremental Learning Framework for Indoor Scene Recognition <i>Aram Kawewong, Rapeeporn Pimpup, Osamu Hasegawa</i></p> <p>Video Saliency Detection via Dynamic Consistent Spatio-Temporal Attention Modelling <i>Sheng-hua Zhong, Yan Liu, Feifei Ren, Jinghuan Zhang, Tongwei Ren</i></p> <p>Gradient Networks: Explicit Shape Matching without Extracting Edges <i>Edward Hsiao, Martial Hebert</i></p> <p>Vesselness Features and the Inverse Compositional AAM for Robust Face Recognition Using Thermal IR <i>Reza Shoja Ghiasi, Ognjen Arandjelovic, Hakim Bendada, Xavier Maldague</i></p>
<p>TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer</p>				
4:45 – 5:45 PM		<p>AAAI-13: Matrices Salient Object Detection via Low-rank and Structured Sparse Matrix Decomposition <i>Houwen Peng, Bing Li, Rongrong Ji, Weiming Hu, Weihua Xiong, Congyan Lang</i></p> <p>Robust Discrete Matrix Completion <i>Jin Huang, Feiping Nie, Heng Huang</i></p> <p>Rank Aggregation via Low-Rank and Structured-Sparse Decomposition <i>Yan Pan, Hanjiang Lai, Cong Liu, Yong Tang, Shuicheng Yan</i></p>	<p>AAAI-13: Options/Pricing Strategic Behavior when Allocating Indivisible Goods Sequentially <i>Thomas Kalinowski, Nina Narodytska, Toby Walsh, Lirong Xia</i></p> <p>Posted Prices Exchange for Display Advertising Contracts <i>Yagil Engel, Moshe Tennenholtz</i></p> <p><i>AAAI-13 Outstanding Paper, Honorable Mention:</i> On the Value of Using Group Discounts under Price Competition <i>Reshef Meir, Tyler Lu, Moshe Tennenholtz, Craig Boutilier</i></p> <p>The Cascade Auction — A Mechanism for Detering Collusion in Auctions <i>Uriel Feige, Gil Kalai, Moshe Tennenholtz</i></p>	<p>AAAI-13: Search Robust Bidirectional Search via Heuristic Improvement <i>Christopher Wilt, Wheeler Ruml</i></p> <p>External Memory Best-First Search for Multiple Sequence Alignment <i>Matthew Hatem, Wheeler Ruml</i></p> <p><i>AAAI-13 Outstanding Paper Award: HC-Search:</i> Learning Heuristics and Cost Functions for Structured Prediction <i>Janardhan Rao Doppa, Alan Fern, Prasad Tadepalli</i></p> <p>Goal-Oriented Euclidean Heuristics with Manifold Learning <i>Wenlin Chen, Yixin Chen, Kilian Q. Weinberger, Qiang Lu, Xiaoping Chen</i></p>
5:45 – 7:30 PM	<p>AAAI-13 STUDENT / EAAI / POKER POSTER SESSION Evergreen Ballroom E</p>			
8:00 – 10:00 PM				

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
1:45 – 2:45 PM				
2:45 – 3:45 PM	<p>AAAI-13 (Cognitive Systems): Situated Interaction</p> <p>Integrating Programming by Example and Natural Language Programming <i>Mehdi Manshadi, Daniel Gildea, James Allen</i></p> <p>A Hybrid Architectural Approach to Understanding and Appropriately Generating Indirect Speech Acts <i>Gordon Briggs, Matthias Scheutz</i></p> <p>An Agent Model for the Appraisal of Normative Events Based in In-Group and Out-Group Relations <i>Nuno Ferreira, Samuel Mascarenhas, Ana Pava, Gennaro Di Tosto, Frank Dignum, John Mc Breen, Nick Degens, Gert Jan Hofstede, Giulia Andrighetto, Rosaria Conte</i></p> <p>SALL-E: Situated Agent for Language Learning <i>Ian Perera, James F. Allen</i></p>	<p>AAAI-13 (AI and the Web): Crowdsourcing</p> <p>Better Human Computation through Principled Voting <i>Andrew Mao, Ariel D. Procaccia, Yiling Chen</i></p> <p>Clustering Crowds <i>Hiroshi Kajino, Yuta Tsuboi, Hisashi Kashima</i></p> <p>The Effects of Performance-Contingent Financial Incentives in Online Labor Markets <i>Ming Yin, Yiling Chen, Yu-An Sun</i></p> <p>Hotspotting — A Probabilistic Graphical Model for Image Object Localization through Crowdsourcing <i>Mahyar Salek, Yoram Bachrach, Peter Key</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>Modern Dynamic Organ Exchanges: Algorithms and Market Design <i>Tuomas Sandholm (SMP)</i></p> <p>Data Mining Social Media for Public Health Applications <i>Henry Kautz (SMP)</i></p>	<p>IAAI-13: Monitoring and Response Systems</p> <p><i>Emerging:</i> Timed Probabilistic Automaton: A Bridge between Raven and Song Scope for Automatic Species Recognition <i>Shufei Duan, Jinglan Zhang, Paul Roe, Jason Wimmer, Xueyan Dong, Anthony Truskinger, Michael Towsey</i></p> <p><i>Emerging:</i> Multiagent Router Throttling: Decentralized Coordinated Response against DDoS Attacks <i>Kleanthis Malialis, Daniel Kudenko</i></p> <p><i>Emerging:</i> Scalable Randomized Patrolling for Securing Rapid Transit Networks <i>Pradeep Varakantham, Hoong Chuin Lau, Zhi Yuan</i></p>
<p>TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer</p>				
4:45 – 5:45 PM	<p>AAAI-13: Logic and Answer Set Programming</p> <p>A General Formal Framework for Path-finding Problems with Multiple Agents <i>Esra Erdem, Doga Gizem Kisa, Umut Oztok, Peter Schüller</i></p> <p>Multi-Cycle Query Caching in Agent Programming <i>Natasha Alechina, Tristan Behrens, Mehdi Dastani, Koen Hindriks, Jomi Fred Hubner, Brian Logan, Hai H. Nguyen, Marc van Zee</i></p> <p>Liberal Safety for Answer Set Programs with External Sources <i>Thomas Eiter, Michael Fink, Thomas Krennwallner, Christoph Redl</i></p> <p>Domain-Specific Heuristics in Answer Set Programming <i>Martin Gebser, Benjamin Kaufmann, Ramon Otero, Javier Romero, Torsten Schaub, Philipp Wanko</i></p>	<p>AAAI-13 (AI and the Web): Learning from the Web</p> <p>Fast Algorithm for Modularity-Based Graph Clustering <i>Hiroaki Shiokawa, Yasuhiro Fujiwara, Makoto Onizuka</i></p> <p>Exploring the Contribution of Unlabeled Data in Financial Sentiment Analysis <i>Jimmy SJ. Ren, Wei Wang, Jiawei Wang, Stephen Shaoyi Liao</i></p> <p>Learning to Rank Effective Paraphrases from Query Logs for Community Question Answering <i>Alejandro Figueroa, Günter Neumann</i></p> <p>OpenEval: Web Information Query Evaluation <i>Mehdi Samadi, Manuela Veloso, Manuel Blum</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>Symbiotic-Autonomous Intelligent Robots <i>Manuela Veloso (SMP)</i></p> <p>RuleML: What's Hot <i>Leora Morgenstern</i></p> <p>RuleML: Computing the Stratified Well-Founded Semantics over Big Data through Mass Parallelization <i>Ilias Tachmazidis and Grigoris Antoniou</i></p>	<p>IAAI-13: Constraint-Based Scheduling</p> <p><i>Deployed:</i> The Deployment of a Constraint-Based Dental School Timetabling System <i>Hadrien Cambazard, Barry O'Sullivan, Helmut Simonis</i></p> <p><i>Emerging:</i> Train Outstable Scheduling as Constraint Satisfaction <i>Andy Hon Wai Chun</i></p> <p><i>Emerging:</i> Balancing the Traveling Tournament Problem for Weekday and Weekend Games <i>Richard Hoshino, Ken-Ichi Kawarabayashi (4:45 – 5:55)</i></p>
5:45 – 7:30 PM	<p>AAAI-13 STUDENT / EAAI / POKER POSTER SESSION Evergreen Ballroom E</p>			
8:00 – 10:00 PM	<p>AAAI-13 PUZZLE HUNT</p>			

	GRAND BALLROOM A	GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
9:00 – 10:00 AM	AAAI-13: Invited Talk: Fighting the Tuberculosis Pandemic Using Machine Learning <i>Kristin Bennett (Rensselaer Polytechnic Institute)</i>			
	COFFEE BREAK, 10:00 – 10:20 AM			
10:20 – 11:20 AM	IAAI-13: IAAI Robert S. Engelmores Award Lecture Giving Data a Voice <i>Deborah McGuinness (Rensselaer Polytechnic Institute)</i>	AAAI-13: AI in Science Mixed Heuristic Local Search for Protein Structure Prediction <i>Swakkhar Shatabda, M. A. Hakim Newton, Abdul Sattar</i> Ranking Scientific Articles by Exploiting Citations, Authors, Journals, and Time Information <i>Yujing Wang, Yunhai Tong, Ming Zeng</i> A Morphogenetically Assisted Design Variation Tool <i>Aaron Adler, Fusun Yaman, Jacob Beal, Jeffrey Cleveland, Hala Mostafa, Annan Mozeika</i> Guiding Scientific Discovery with Explanations using DEMUD <i>Kiri L. Wagstaff, Nina L. Lanza, David R. Thompson, Thomas G. Dietterich, Martha S. Gilmore</i>	AAAI-13: Nearest Neighbors and Hierarchical Clustering Discovering Hierarchical Structure for Sources and Entities <i>Aditya Pal, Nilesh Dalvi, Kedar Bellare</i> Walking on Minimax Paths for k -NN Search <i>Kye-Hyeon Kim, Seungjin Choi</i> Formalizing Hierarchical Clustering as Integer Linear Programming <i>Sean Gilpin, Siegfried Nijssen, Ian Davidson</i> Reciprocal Hash Tables for Nearest Neighbor Search <i>Xianglong Liu, Junfeng He, Bo Lang</i>	AAAI-13: Teamwork Cost-Optimal Planning by Self-Interested Agents <i>Raz Nissim, Ronen I. Brafman</i> Teamwork with Limited Knowledge of Teammates <i>Samuel Barrett, Peter Stone, Sarit Kraus, Avi Rosenfeld</i> Composition Games for Distributed Systems: The EU Grant Games <i>Shay Kuttan, Ron Lavi, Amitabh Trehan</i> Information Sharing under Costly Communication in Joint Exploration <i>Igor Rochlin, David Sarne</i>
11:20 AM – 12:20 PM		AAAI-13: Bribery / Voting Computational Aspects of Nearly Single-Peaked Electorates <i>Gabor Erdélyi, Martin Lackner, Andreas Pfandler</i> Ties Matter: Complexity of Manipulation when Tie-breaking with a Random Vote <i>Haris Aziz, Serge Gaspers, Nicholas Mattei, Nina Narodytska, Toby Walsh</i> Bribery in Voting with Soft Constraints <i>Maria Silvia Pini, Francesca Rossi, Kristen Brent Venable</i> How Bad Is Selfish Voting? <i>Simina Brânzei, Ioannis Caragiannis, Jamie Morgenstern, Ariel D. Procaccia</i>	AAAI-13: Planning Hypothesis Exploration for Malware Detection Using Planning <i>Shirin Sohrabi, Octavian Udrea, Anton Riabov</i> Red-Black Relaxed Plan Heuristics <i>Michael Katz, Jörg Hoffmann, Carmel Domshlak</i> Truncated Incremental Search: Faster Replanning by Exploiting Suboptimality <i>Sandip Aine, Maxim Likhachev</i> A First-Order Formalization of Commitments and Goals for Planning <i>Felipe Meneguzzi, Pankaj R. Telang, Munindar P. Singh</i>	AAAI-13: Situation Calculus and STRIPS Multiagent Knowledge and Belief Change in the Situation Calculus <i>Liangda Fang, Yongmei Liu</i> Progression of Decomposed Situation Calculus Theories <i>Denis Ponomaryov, Mikhail Soutchanski</i> Data-Parallel Computing Meets STRIPS <i>Erez Karpas, Tomer Sagi, Carmel Domshlak, Avigdor Gal, Avi Mendelson, Moshe Tennenholtz</i> Reasoning about Saturated Conditional Independence under Uncertainty: Axioms, Algorithms and Levesque's Situations to the Rescue <i>Sebastian Link</i>
12:20 – 12:30 PM		Late-Breaking Papers Multiple Outcome Supervised Latent Dirichlet Allocation for Expert Discovery in Online Forums <i>Jose San Pedro, Alexandros Karatzoglou</i> Supervised Topic Model with Consideration of User and Item <i>Sheng Wang, Fangtao Li, Ming Zhang</i> Combining CP-Nets with the Power of Ontologies <i>Tommaso Di Noia, Thomas Lukasiewicz</i> Negative Influence Minimization by Blocking Nodes in Social Networks <i>Senzhang Wang, Xiaojian Zhao, Yan Chen, Zhoujun Li, Kai Zhang, Jiali Xia</i>	Late-Breaking Papers Comprehensive Cross-Hierarchy Cluster Agreement Evaluation <i>David M. Johnson, Caiming Xiong, Jing Gao, Jason J. Corso</i> Strong Nash Equilibrium Is in Smoothed P <i>Nicola Gatti, Marco Rocco, Tuomas Sandholm</i> Verbal IQ of a Four-Year Old Achieved by an AI System <i>Stellan Öhlsson, Robert H. Sloan, György Turán, Aaron Urasky</i> Approximation of Lorenz-Optimal Solutions in Multiobjective Markov Decision Processes <i>Patrice Perny, Paul Weng, Judy Goldsmith, Josiah P. Hanna</i> Covering Landmark Interactions for Semantically Diverse Plans <i>Daniel Bryce, Renée C. Bryce</i>	Late-Breaking Papers Conditional Outlier Approach for Detection of Unusual Patient Care Actions <i>Milos Hauskrecht, Shyam Visweswaran, Gregory F. Cooper, Gilles Clermont</i> Discriminative Multi-Task Feature Selection <i>Yahong Han, Jianguang Zhang, Zhongwen Xu, Shou-I Yu</i> A Modular Framework for the Automatic Reconstruction of Shredded Documents <i>Razvan Ranca</i> Learning When to Reject an Importance Sample <i>Jeremy C. Weiss, Sriraam Natarajan, C. David Page</i>
	LUNCH BREAK, 12:30– 1:45 PM			

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
9:00 – 10:00 AM				
COFFEE BREAK. 10:00 – 10:20 AM				
10:20 – 11:20 AM	<p>AAAI-13: Language Processing <i>AAAI-13 Outstanding Paper, Honorable Mention: Effective Bilingual Constraints for Semi-Supervised Learning of Named Entity Recognizers</i> Mingqiu Wang, Wanxiang Che, Christopher D. Manning</p> <p>Grounding Natural Language References to Unvisited and Hypothetical Locations Tom Williams, Rehj Cantrell, Gordon Briggs, Paul Schermerhorn, Matthias Scheutz</p> <p>An Extended GHKM Algorithm for Inducing Lambda-SCFG Peng Li, Yang Liu, Maosong Sun</p> <p>Automatic Identification of Conceptual Metaphors with Limited Knowledge Lisa Gandy, Nadji Allan, Mark Atallah, Ophir Frieder, Newton Howard, Sergey Kanareykin, Moshe Koppel, Mark Last, Yair Neuman, Shlomo Argamon</p>	<p>AAAI-13 (Robotics): Robot Motion Planning Robot Motion Planning with Dynamics as Hybrid Search Erion Plaku</p> <p>GSMDPs for Multi-Robot Sequential Decision-Making João V. Messias, Matthijs T. J. Spaan, Pedro U. Lima</p> <p>A Simple, but NP-Hard, Motion Planning Problem Lawrence H. Erickson, Steven M. LaValle</p> <p>Structure and Intractability of Optimal Multi-Robot Path Planning on Graphs Jingjin Yu, Steven M. Lavalle</p>	<p>AAAI-13 Classic and Senior Member Papers (SMP) <i>Classic Paper Award: A Filtering Algorithm for Constraints of Difference in CSPs</i> Jean-Charles Regin</p> <p><i>Classic Paper Award: Acting Optimally in Partially Observable Stochastic Domains</i> Anthony Cassandra</p> <p>Decision-Making in Open Mixed Networks Kobi Gal (SMP)</p>	
11:20 AM – 12:20 PM	<p>AAAI-13 (AI and the Web): Analyzing Networks and Graphs Fast and Exact Top-k Algorithm for PageRank Yasuhiro Fujiwara, Makoto Nakatsuji, Hiroaki Shiokawa, Takeshi Mishima, Makoto Onizuka</p> <p>Heterogeneous Metric Learning with Joint Graph Regularization for Cross-Media Retrieval Xiaohua Zhai, Yuxin Peng, Jianguo Xiao</p> <p>TONIC: Target Oriented Network Intelligence Collection for the Social Web Roni Stern, Liron Samama, Rami Puzis, Tal Beja, Zahy Bnaya, Ariel Felner</p> <p>Preventing Unraveling in Social Networks Gets Harder Rajesh Chitnis, Fedor V. Fomin, Petr A. Golovach</p>	<p>AAAI-13 (Robotics): ML in Robotics Multi-Target Detection and Recognition by UAVs Using Online POMDPs Caroline Ponzoni Carvalho Chanel, Florent Teychert-Königsbuch, Charles Lesire</p> <p>Compact RGBD Surface Models Based on Sparse Coding Michael Ruhnke, Liefeng Bo, Dieter Fox, Wolfram Burgard</p> <p>Open-Loop Planning in Large-Scale Stochastic Domains Ari Weinstein, Michael L. Littman</p> <p>Bayesian Nonparametric Multi-Optima Policy Search in Reinforcement Learning Danilo Bruno, Sylvain Calinon, Darwin G. Caldwell</p>	<p>AAAI-13: Spotlights and Senior Members (SMP) RSS: What's Hot Luke Zettlemoyer</p> <p>CP: What's Hot and Challenges Pascal Van Hentenryck</p> <p>CP: Challenges Barry O'Sullivan</p>	<p>IAAI-13: Structure Analysis <i>Deployed: USI Answers: Natural Language Question Answering Over (Semi-) Structured Industry Data</i> Ulli Waltinger, Dan Tecuci, Mihaela Olteanu, Vlad Mocanu, Sean Sullivan</p> <p><i>Emerging: Clustering Hand-Drawn Sketches via Analogical Generalization</i> Maria D. Chang, Kenneth D. Forbus (11:20–12:10)</p>
12:20 – 12:30 PM	<p>Late-Breaking Papers Modular Answer Set Solving Yuliya Lierler, Mirek Truszczyński</p> <p>Additive Counterexample-Guided Cartesian Abstraction Refinement Jendrik Seipp, Malte Helmert</p> <p>Partial Domain Search Tree for Constraint-Satisfaction Problems Guni Sharon, Ariel Felner, Roni Stern, Nathan Sturtevant</p> <p>Volatile Multi-Armed Bandits for Guaranteed Targeted Social Crawling Zahy Bnaya, Rami Puzis, Roni Stern, Ariel Felner</p> <p>Localizing Web Videos from Heterogeneous Images Xian-Ming Liu, Yue Gao, Rongrong Ji, Shiyu Chang, Thomas Huang</p>			
LUNCH BREAK, 12:30– 1:45 PM				

	GRAND BALLROOM A	GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
1:45 – 2:45 PM	AAAI-13 Invited Talk: Poker AI: Algorithms for Creating Game-Theoretic Strategies for Large Incomplete-Information Games <i>Tuomas Sandholm (Carnegie Mellon University)</i>			
2:45 – 3:45 PM		AAAI-13: Constraints Unified Constraint Propagation on Multi-View Data <i>Zhiwu Lu, Yuxin Peng</i> On the Subexponential Time Complexity of CSP <i>Iyad Kanj, Stefan Szeider</i> Improving the Performance of Consistency Algorithms by Localizing and Bolstering Propagation in a Tree Decomposition <i>Shant Karakashian, Robert J. Woodward, Berthe Y Choueiry</i> Extending STR to a Higher-Order Consistency <i>Christophe Lecoutre, Anastasia Paparrizou, Kostas Stergiou</i>	AAAI-13: Tensors and Manifolds Multiscale Manifold Learning <i>Chang Wang, Sridhar Mahadevan</i> A Tensor-Variate Gaussian Process for Classification of Multidimensional Structured Data <i>Qibin Zhao, Liqing Zhang, Andrzej Cichocki</i> A Cyclic Weighted Median Method for L_1 Low-Rank Matrix Factorization with Missing Entries <i>Deyu Meng, Zongben Xu, Lei Zhang, Ji Zhao</i> Supervised Nonnegative Tensor Factorization with Maximum-Margin Constraint <i>Fei Wu, Xu Tan, Yi Yang, Dacheng Tao, Silian Tang, Yueting Zhuang</i>	AAAI-13: Equilibrium and Negotiation An Agent Design for Repeated Negotiation and Information Revelation with People <i>Noam Peled, Ya'akov (Kobi) Gal, Sarit Kraus</i> Interdependent Multi-Issue Negotiation for Energy Exchange in Remote Communities <i>Muddasser Alam, Alex Rogers, Sarvapali D. Ramchurn</i> Algorithms for Strong Nash Equilibrium with More than Two Agents <i>Nicola Gatti, Marco Rocco, Tuomas Sandholm</i> Equilibria of Online Scheduling Algorithms <i>Itai Ashlagi, Brendan Lucier, Moshe Tennenholtz</i>
TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer				
4:45 – 5:45 PM		AAAI-13: Panel: Conference Reviewing: Best Practices <i>Michael Littman and Marie desJardins</i>	AAAI-13: Planning Under Uncertainty Assumption-Based Planning: Generating Plans and Explanations under Incomplete Knowledge <i>Sammy Davis-Mendelow, Jorge A. Baier, Sheila A. McIlraith</i> A Fast Pairwise Heuristic for Planning under Uncertainty <i>Koosha Khalvati, Alan Mackworth</i> Mixed Observability Predictive State Representations <i>Sylvie C. W. Ong, Yuri Grinberg, Joelle Pineau</i> Qualitative Planning under Partial Observability in Multi-Agent Domains <i>Ronen I. Brafman, Guy Shani, Shlomo Zilberstein</i>	AAAI-13: Logic and Knowledge Representation Dynamic Minimization of Sentential Decision Diagrams <i>Arthur Choi, Adnan Darwiche</i> Radial Restraint: A Semantically Clean Approach to Bounded Rationality for Logic Programs <i>Benjamin Groszof, Terrance Swift</i> Backdoors to Normality for Disjunctive Logic Programs <i>Johannes Klaus Fichte, Stefan Szeider</i> Answering Counting Aggregate Queries over Ontologies of DL-Lite Family <i>Egor V. Kostylev, Juan L. Reutter</i>
7:00 – 10:00 PM	AAAI-13 BANQUET Bellevue Arts Museum 7:00 PM – 10:00 PM <i>(reservation required)</i>			

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
1:45 – 2:45 PM				
2:45 – 3:45 PM	<p>AAAI-13: (AI and the Web): Recommendation Systems</p> <p>Understanding and Predicting Interestingness of Videos <i>Yu-Gang Jiang, Yanran Wang, Rui Feng, Xi-angyang Xue, Yingbin Zheng, Hanfang Yang</i></p> <p>Active Transfer Learning for Cross-System Recommendation <i>Lili Zhao, Sinno Jialin Pan, Evan Wei Xiang, Erheng Zhong, Zhongqi Lu, Qiang Yang</i></p> <p>LA-CTR: A Limited Attention Collaborative Topic Regression for Social Media <i>Jeon-Hyung Kang, Kristina Lerman</i></p> <p>A Fast Bandit Algorithm for Recommendations to Users with Heterogeneous Tastes <i>Pushmeet Kohli, Mahyar Salek, Greg Stoddard</i></p>	<p>AAAI-13: (Robotics): Human-Robot Collaboration</p> <p>Learning Collaborative Impedance-Based Robot Behaviors <i>Leonel Rozo, Sylvain Calinon, Darwin Caldwell, Pablo Jiménez, Carme Torras</i></p> <p>Inferring Robot Task Plans from Human Team Meetings: A Generative Modeling Approach with Logic-Based Prior <i>Been Kim, Caleb Chacha, Julie Shah</i></p> <p>Data-Efficient Generalization of Robot Skills with Contextual Policy Search <i>Andras Gabor Kupcsik, Marc Peter Deisenroth, Jan Peters, Gerhard Neumann</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>ICWSM: What's Hot: Structure and Dynamics of Social Networks and Information Networks <i>Lada Adamic</i></p> <p>ICWSM: Challenges <i>Emre Kiciman</i></p> <p>AAMAS: Best Paper <i>Carmine Ventre</i></p> <p>AAMAS: What's Hot <i>Milind Tambe</i></p>	<p>IAAI-13: Event Detection</p> <p><i>Emerging:</i> Leveraging Crowdsourcing to Detect Improper Tasks in Crowdsourcing Marketplaces <i>Yukino Baba, Hisashi Kashima, Kei Kinoshita, Goushi Yamaguchi, Yosuke Akiyoshi</i></p> <p><i>Emerging:</i> Detection and Prediction of Adverse and Anomalous Events in Medical Robots <i>Kai Liang, Feng Cao, Zhuofu Bai, Mark Renfrew, M. Cenk Cavusoglu, Andy Podgurski, Soumya Ray</i></p> <p><i>Emerging:</i> Detecting the Moment of Snap in Real-World Football Videos <i>Behrooz Mahasseni, Sheng Chen, Alan Fern, Sinisa Todorovic</i></p>
<p>TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer</p>				
4:45 – 5:45 PM	<p>AAAI-13: Kernels and Density Estimation</p> <p>A Kernel Density Estimate-Based Approach to Component Goodness Modeling <i>Nuno Cardoso, Rui Abreu</i></p> <p>On Power-Law Kernels, Corresponding Reproducing Kernel Hilbert Space and Applications <i>Debarghya Ghoshdastidar, Ambedkar Dukkipati</i></p> <p>Symmetry-Aware Marginal Density Estimation <i>Mathias Niepert</i></p> <p>A Robust Bayesian Truth Serum for Non-Binary Signals <i>Goran Radanovic, Boi Faltings</i></p>		<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>AIIDE: What's Hot <i>Gita Sukthankar</i></p> <p>LSG: Challenges <i>Martin Zinkevich</i></p> <p>ISWC: Best Paper: Discovering Concept Coverings in Ontologies of Linked Data Sources <i>Rahul Parundekar</i></p>	<p>IAAI-13: Medical Applications</p> <p><i>Deployed:</i> Integrating Digital Pens in Breast Imaging for Instant Knowledge Acquisition <i>Daniel Sonntag, Markus Weber, Matthias Hammon, Alexander Cavallaro</i></p> <p><i>Emerging:</i> Policies to Optimize Work Performance and Thermal Safety in Exercising Humans <i>Mark Buller, Eric Sodomka, William Tharion, Cynthia Clements, Reed Hoyt, Odest Chadwicke Jenkins</i></p> <p><i>Emerging:</i> Physical Activity Recognition from Accelerometer Data Using a Multi-Scale Ensemble Method <i>Yonglei Zheng, Weng-Keen Wong, Xinze Guan, Stewart Trost</i></p> <p>(4:45 – 5:55)</p>
7:00 – 10:00 PM	<p>AAAI-13 BANQUET Bellevue Arts Museum 7:00 PM – 10:00 PM (reservation required)</p>			

	GRAND BALLROOM A	GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
9:00 – 10:00 AM	AAAI-13: Invited Talk: Socially Assistive Robotics: Human-Robot Interaction Methods for Creating Robots That Care <i>Maja Mataric</i>			
	COFFEE BREAK, 10:00 – 10:20 AM			
10:20 – 11:20 AM	IAAI-13: Invited Talk: Applying AI to Vehicle Failure Monitoring for Autonomous Vehicle Durability Testing <i>Howie (Hao) Yang and Nestor Rychtycky (Ford Motor Company)</i>	AAAI-13: Privacy and Social Media Social Rankings in Human-Computer Committees <i>Moshe Bitan, Ya'akov Gal, Sarit Kraus, Elad Dokov, Amos Azaria</i> From Interest to Function: Location Estimation in Social Media <i>Yan Chen, Jichang Zhao, Xia Hu, Xiaoming Zhang, Zhoujun Li, Tat-Seng Chua</i> Automated Workflow Synthesis <i>Haoqi Zhang, Eric Horvitz, David C. Parkes</i> Search More, Disclose Less <i>Chen Hajaj, Noam Hazon, David Sarne, Avshalom Elmalech</i>	AAAI-13: Mechanism Design and Aggregation Dynamic Social Choice with Evolving Preferences <i>David C. Parkes, Ariel D. Procaccia</i> A Framework for Aggregating Influenced CP-Nets and Its Resistance to Bribery <i>Alberto Maran, Nicolas Maudet, Maria Silvia Pini, Francesca Rossi, Kristen Brent Venable</i> Bundling Attacks in Judgment Aggregation <i>Noga Alon, Dvir Falik, Reshef Meir, Moshe Tenenholz</i> On the Social Welfare of Mechanisms for Repeated Batch Matching <i>Elliot Anshelevich, Meenal Chhabra, Sanmay Das, Matthew Gerrior</i>	AAAI-13: Multi-* Machine Learning Multi-Label Learning with PRO Loss <i>Miao Xu, Yu-Feng Li, Zhi-Hua Zhou</i> Supervised Coupled Dictionary Learning with Group Structures for Multi-Modal Retrieval <i>Yueting Zhuang, Yanfei Wang, Fei Wu, Yin Zhang, Weiming Lu</i> Convex Subspace Representation Learning from Multi-View Data <i>Yuhong Guo</i> AAAI-13 Outstanding Paper Award: SMILE: Shuffled Multiple-Instance Learning <i>Gary Doran, Soumya Ray</i>
11:20 AM – 12:20 PM		AAAI-13: NLP Generation and Translation Story Generation with Crowdsourced Plot Graphs <i>Boyang Li, Stephen Lee-Urban, George Johnston, Mark Riedl</i> Enforcing Meter in Finite-Length Markov Sequences <i>Pierre Roy, François Pachet</i> Generating Natural-Language Video Descriptions Using Text-Mined Knowledge <i>Niveda Krishnamoorthy, Girish Malkarnenkar, Raymond Mooney, Kate Saenko, Sergio Guadarrama</i> A Topic-Based Coherence Model for Statistical Machine Translation <i>Deyi Xiong, Min Zhang</i>	AAAI-13: Satisfiability Resolution and Parallelizability: Barriers to the Efficient Parallelization of SAT Solvers <i>George Katsirelos, Ashish Sabharwal, Horst Samulowitz, Laurent Simon</i> Partial MUS Enumeration <i>Alessandro Previti, Joao Marques-Silva</i> Greedy or Not? Best Improving versus First Improving Stochastic Local Search for MAXSAT <i>Darrell Whitley, Adele Howe, Douglas Hains</i> Improving WalkSAT for Random k -Satisfiability Problem with $k > 3$ <i>Shaowei Cai, Kaile Su, Chuan Luo</i>	AAAI-13: Security and Network Games AAAI-13 Outstanding Paper, Honorable Mention: Sensitivity of Diffusion Dynamics to Network Uncertainty <i>Abhijn Adiga, Chris Kuhlman, Henning S. Mortveit, Anil Kumar S. Vullikanti</i> Solving Security Games on Graphs via Marginal Probabilities <i>Joshua Letchford, Vincent Conitzer</i> Bounding the Cost of Stability in Games over Interaction Networks <i>Reshef Meir, Yair Zick, Edith Elkind, Jeffrey S. Rosenschein</i> Analyzing the Effectiveness of Adversary Modeling in Security Games <i>Thanh H. Nguyen, Rong Yang, Amos Azaria, Sarit Kraus, Milind Tambe</i>
12:20 – 12:30 PM		AAAI-13: Late-Breaking Papers Elo Ratings for Structural Credit Assignment in Multiagent Systems <i>Logan Yliniemi, Kagan Tumer</i> Automated Design of Search with Composability <i>Ashish Sabharwal, Horst Samulowitz, Tom Schrijvers, Peter J. Stuckey, Guido Tack</i> Movie Recommender System for Profit Maximization <i>Amos Azaria, Avinatan Hassidim, Sarit Kraus, Adi Eshkol, Ofer Weintraub, Irit Netanely</i>	AAAI-13: Late-Breaking Papers Virtual Structure Reduction for Distributed Constraint Problem Solving <i>Nathaniel Gemelli, Jeffrey Hudack, Jae C. Oh</i> Identifying Important Nodes in Heterogeneous Networks <i>Oliver Schulte, Fatemeh Riahi, Qing Li</i> Synthetic Photographs for Learning Aesthetic Preferences <i>Soja-Marie Morgens, Arnav Jhala</i> Machine Learning for Meeting Analysis <i>Been Kim, Cynthia Rudin</i>	AAAI-13: Late-Breaking Papers Supersparse Linear Integer Models for Predictive Scoring Systems <i>Berk Ustun, Stefano Tracà, Cynthia Rudin</i> Detecting Patterns of Crime with <i>Series Finder</i> <i>Tong Wang, Cynthia Rudin, Daniel Wagner, Rich Sevieri</i> Predicting Power Failures with Reactive Point Processes <i>Seyda Ertekin, Cynthia Rudin, Tyler H. McCormick</i> An Interpretable Stroke Prediction Model Using Rules and Bayesian Analysis <i>Benjamin Letham, Cynthia Rudin, Tyler H. McCormick, David Madigan</i>
	LUNCH BREAK, 12:30– 1:45 PM			

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
9:00 – 10:00 AM				
	COFFEE BREAK, 10:00 – 10:20 AM			
10:20 – 11:20 AM	<p>AAAI-13: Temporal Reasoning Timelines with Temporal Uncertainty <i>Alessandro Cimatti, Andrea Micheli, Marco Roveri</i></p> <p>Decoupling the Multiagent Disjunctive Temporal Problem <i>James C. Boerkoel Jr., Edmund H. Durfee</i></p> <p>Temporal Milestones in HTNs <i>Fusun Yaman, Brett Benyo, Alice M. Mulvehill</i></p> <p>Simple Temporal Problems with Taboo Regions <i>T. K. Satish Kumar, Marcello Cirillo, Sven Koenig</i></p>	<p>AAAI-13: (Computationally Sustainable AI): MDPs and Sequential Processes Agent Cooperatives for Effective Power Consumption Shifting <i>Charilaos Akasiadis, Georgios Chalkiadakis</i></p> <p>PAC Optimal Planning for Invasive Species Management: Improved Exploration for Reinforcement Learning from Simulator-Defined MDPs <i>Thomas G. Dietterich, Majid Alkaee Taleghan, Mark Crowley</i></p> <p>Online Optimization with Dynamic Temporal Uncertainty: Incorporating Short Term Predictions for Renewable Integration in Intelligent Energy Systems <i>Vikas K. Garg, T. S. Jayram, Balakrishnan Narayanaswamy</i></p> <p>A Tractable Leader-Follower MDP Model for Animal Disease Management <i>Régis Sabbadin, Anne-France Viet</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP) Meeting the Responsibility to Explain AI <i>Bruce Buchanan and Reid Smith (SMP)</i></p> <p>ICAPS: Best Paper <i>Ronald Petrick</i></p> <p>ICAPS: What's Hot <i>Malte Helmert</i></p>	
11:20 AM – 12:20 PM	<p>AAAI-13: (AI and the Web): Ontologies and Reasoning Introducing Nominals to the Combined Query Answering Approaches for EL <i>Giorgio Stefanoni, Boris Motik, Ian Horrocks</i></p> <p>Not Quite the Same: Identity Constraints for the Web of Linked Data <i>Gerard de Melo</i></p>	<p>AAAI-13: (CompSustAI): Data Mining CSAI Award: A Temporal Motif Mining Approach to Unsupervised Energy Disaggregation ... <i>Huijuan Shao, Manish Marwah, Naren Ramakrishnan</i></p> <p>Multiple Hypothesis Object Tracking For Unsupervised Self-Learning ... <i>J. H. Faghmous, M. Uluyol, L. Styles, M. Le, V. Mithal, S. Boriah, V. Kumar</i></p> <p>Adaptive Spatio-Temporal Exploratory Models: Hemisphere-Wide Species Distributions ... <i>Daniel Fink, Theodoros Damoulas, Jaimin Dave</i></p> <p>CSAI Award: Approximate Bayesian Inference for Reconstructing Velocities of Migrating Birds from Weather Radar <i>D. Sheldon, A. Farnsworth, J. Irvine, B. Van Doren, K. Webb, T. G. Dietterich, S. Kelling</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP) ECML/PKDD: What's Hot <i>Kristian Kersting</i></p> <p>ICML: What's Hot <i>Michael Littman</i></p> <p>NIPS: What's Hot <i>Rob Fergus</i></p>	<p>IAAI-13: Pattern Analysis and Modeling <i>Emerging: Interactive Information Extraction and Navigation to Enable Effective Link Analysis and Visualization of Unstructured Text</i> <i>Emily Budlong, Carrie Pine, Mark Zappavigna, James Homer, Charles Proefrock, John Gucwa, Michael Crystal, Ralph Weischedel</i></p> <p><i>Challenge: Scalable Models for Patterns of Life</i> <i>Jeremiah Folsom-Kovarik, Sae Schatz, Randolph M. Jones, Kathleen Bartlett, Robert E. Wray</i></p> <p>(11:20 –12:00)</p>
12:20 – 12:30 PM	<p>AAAI-13: Late-Breaking Papers Climate Prediction via Matrix Completion <i>Mahsa Ghafarianzadeh, Claire Monteleoni</i></p> <p>Using Machine Learning to Improve Stochastic Optimization <i>David H. Wolpert, Dev Rajnarayan</i></p> <p>Label Ranking by Directly Optimizing Performance Measures <i>Qishen Wang, Ou Wu, Ying Chen, Weiming Hu</i></p> <p>Utilizing Landmarks in Euclidean Heuristics for Optimal Planning <i>Qiang Lu, Wenlin Chen, Yixin Chen, Kilian Q. Weinberger, Xiaoping Chen</i></p>			
	LUNCH BREAK, 12:30 – 1:45 PM			

	GRAND BALLROOM A	GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
1:45 – 2:45 PM		AAAI-13: Vision Supervised and Projected Sparse Coding for Image Classification <i>Jin Huang, Feiping Nie, Heng Huang, Chris Ding</i> Joint Object and Pose Recognition Using Homeomorphic Manifold Analysis <i>Haopeng Zhang, Tarek El-Gaaly, Ahmed El-gammal, Zhiguo Jiang</i> Vector-Valued Multi-View Semi-Supervised Learning for Multi-Label Image Classification <i>Yong Luo, Dacheng Tao, Chang Xu, Dongchen Li, Chao Xu</i>	AAAI-13: Bayesian Inference GISS: Combining Gibbs Sampling and SampleSearch for Inference in Mixed Probabilistic and Deterministic Graphical Models <i>Deepak Venugopal, Vibhav Gogate</i> Complexity of Inferences in Polytree-Shaped Semi-Qualitative Probabilistic Networks <i>Cassio P. de Campos, Fabio G. Cozman</i> Joint Extraction and Labeling via Graph Propagation for Dictionary Construction <i>Doo Soon Kim, Kunal Verma, Peter Z. Yeh</i>	AAAI-13: Game Theory Automating Collusion Detection in Sequential Games <i>Parisa Mazrooei, Christopher Archibald, Michael Bowling</i> Fast Equilibrium Computation for Infinitely Repeated Games <i>Garrett Andersen, Vincent Conitzer</i> Efficient Evolutionary Dynamics with Extensive-Form Games <i>Nicola Gatti, Fabio Panozzo, Marcello Restelli</i> Optimal Coalition Structure Generation in Cooperative Graph Games <i>Yoram Bachrach, Pushmeet Kohli, Vladimir Kolmogorov, Morteza Zadimoghaddam</i>
2:45 – 3:45 PM		AAAI-13: Classification Uncorrelated Lasso <i>Si-Bao Chen, Chris Ding, Bin Luo, Ying Xie</i> Large-Scale Hierarchical Classification via Stochastic Perceptron <i>Dehua Liu, Bojun Tu, Hui Qian, Zhihua Zhang</i> Teaching Classification Boundaries to Humans <i>Sumit Basu, Janara Christensen</i> A Maximum K-Min Approach for Classification <i>Mingzhi Dong, Liang Yin, Weihong Deng, Li Shang, Jun Guo, Honggang Zhang</i>	AAAI-13: Game Playing / Plan Reuse Optimizing Objective Function Parameters for Strength in Computer Game-Playing <i>Yoshikuni Sato, Makoto Miwa, Shogo Takeuchi, Daisuke Takahashi</i> Filtering with Logic Programs and Its Application to General Game Playing <i>Michael Thielscher</i> Parameterized Complexity Results for Plan Reuse <i>Ronald de Haan, Anna Roubickova, Stefan Szeider</i> Model-Lite Case-Based Planning <i>Hankz Hankui Zhuo, Tuan Nguyen, Subbarao Kambhampati</i>	AAAI-13: Sample Complexity / Anomaly Detection Towards Cohesive Anomalies Mining <i>Yun Xiong, Yangyong Zhu, Philip S. Yu, Jian Pei</i> A Generalized Student- <i>t</i> Based Approach to Mixed-Type Anomaly Detection <i>Yen-Cheng Lu, Feng Chen, Yang Chen, Chang-Tien Lu</i> Sample Complexity and Performance Bounds for Non-Parametric Approximate Linear Programming <i>Jason Pazis, Ronald Parr</i> <i>AAAI-13 Outstanding Paper, Honorable Mention: PAC Optimal Exploration in Continuous Space Markov Decision Processes</i> <i>Jason Pazis, Ronald Parr</i>
TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer				

	GRAND BALLROOM I	GRAND BALLROOM J	EVERGREEN BALLROOM B	EVERGREEN BALLROOM A
1:45 – 2:45 PM	<p>AAAI-13: Task Learning</p> <p>Active Task Selection for Lifelong Machine Learning <i>Paul Ruvolo, Eric Eaton</i></p> <p>Learning Integrated Symbolic and Continuous Action Models for Continuous Domains <i>Joseph Z. Xu, John E. Laird</i></p> <p>Sparse Multi-Task Learning for Detecting Influential Nodes in an Implicit Diffusion Network <i>Yingze Wang, Guang Xiang, Shi-Kuo Chang</i></p> <p>Multiagent Learning with a Noisy Global Reward Signal <i>Scott Proper, Kagan Tumer</i></p>	<p>AAAI-13: (Computationally Sustainable AI): Multiagent Systems</p> <p>Model Predictive Control with Uncertainty in Human Driven Systems <i>Alexander Styler, Illah Nourbakhsh</i></p> <p>Negotiated Learning for Smart Grid Agents: Entity Selection Based on Dynamic Partially Observable Features <i>Prashant P. Reddy, Manuela M. Veloso</i></p> <p>Autonomous Agents in Future Energy Markets: The 2012 Power Trading Agent Competition <i>Wolfgang Ketter, Markus Peters, John Collins</i></p> <p>Data Challenge: Large Landscape Conservation—Synthetic and Real-World Datasets <i>Bistra Dilkina, K. Lai, R. Le Bras, Y. Xue, C. P. Gomes, A. Sabharwal, J. Suter, K. S. McKelvey, M. K. Schwartz, C. Montgomery</i></p>		<p>IAAI-13: Medical Prediction Problems</p> <p><i>Emerging:</i> Assessing the Predictability of Hospital Readmission Using Machine Learning <i>Arian Hosseinzadeh, Masoumeh Izadi, Aman Verma, Doina Precup, David Buckeridge</i></p> <p><i>Emerging:</i> Early Prediction of Coronary Artery Calcification Levels Using Machine Learning <i>Sriaram Natarajan, Kristian Kersting, Edward Ip, David R. Jacobs Jr, Jeffrey Carr</i></p> <p><i>Emerging:</i> Case-Based Meta-Prediction for Bioinformatics <i>Xi Yun, Susan L. Epstein, Weiwei Han, Lei Xie</i></p>
2:45 – 3:45 PM		<p>AAAI-13: (Computationally Sustainable AI): Optimization and Search</p> <p>Enabling E-Mobility: Facility Location for Battery Loading Stations <i>Sabine Storandt, Stefan Funke</i></p> <p>Robust Network Design for Multispecies Conservation <i>Ronan Le Bras, Bistra Dilkina, Yexiang Xue, Carla P. Gomes, Kevin S. McKelvey, Michael K. Schwartz, Claire A. Montgomery</i></p> <p>Resource Sharing for Control of Wildland Fires <i>Alan Tsang, Kate Larson, Rob McAlpine</i></p> <p>Multiagent Coordination for Energy Consumption Scheduling in Consumer Cooperatives <i>Andreas Veit, Ying Xu, Ronghuo Zheng, Nilanjan Chakraborty, Katia Sycara</i></p>	<p>AAAI-13: Spotlights and Senior Members (SMP)</p> <p>How Can AI Help Synthetic Biology? <i>Fusun Yaman, Aaron Adler, Jacob Beal (SMP)</i></p> <p>ISWC: What's Hot, Challenges: Diagnosing Road Traffic Congestions in the Semantic Web <i>Freddy Lecue, Anika Schumann</i></p>	
<p>TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM Evergreen Ballroom and Foyer</p>				

Tutorial Forum

AAAI-13 technical registrants may attend up to four consecutive tutorials.

Sunday, July 14

9:00 AM – 1:00 PM

SA1: Combining Logic and Probability: Languages, Algorithms, and Applications

*Pedro Domingos and
Kristian Kersting*
Evergreen A/B, Lobby Level

SA2: Decision Diagrams for Discrete Optimization

Willem-Jan Van Hoeve
Evergreen F, Lobby Level

SA3: Game Theory for Security

*Albert Xin Jiang, Manish Jain,
Rong Yang, and Bo An*
Evergreen C, Lobby Level

SA4: Sentiment Mining from User Generated Content

Lyle Ungar and Ronen Feldman
Evergreen G/H, Lobby Level

2:00 PM – 6:00 PM

SP1: Deep Learning of Representations

Yoshua Bengio
Evergreen A/B, Lobby Level

SP2: Prediction, Belief, and Markets

*Jenn Wortman Vaughan and
Jacob Abernethy*
Evergreen F, Lobby Level

SP3: Symbolic Methods for Probabilistic Inference, Optimization, and Decision-Making

Scott Sanner
Evergreen G/H, Lobby Level

SP4: Textual Inference

Sebastian Pado and Rui Wang
Evergreen C, Lobby Level

Monday, July 15

9:00 AM – 1:00 PM

MA1: Answer Set Solving in Practice

Martin Gebser and Torsten Schaub
Evergreen C, Lobby Level

MA2: From Bandits to Monte-Carlo Tree Search: The Optimistic Principle Applied to Games, Optimization, and Planning

Remi Munos
Evergreen A/B, Lobby Level

MA3: Information Trustworthiness

*Jeffrey Pasternack, Dan Roth, and
V. G. Vinod Vydiswaran*
Evergreen F, Lobby Level

MA4: Maximum Satisfiability and Extensions

Carlos Ansótegui
Evergreen G/H, Lobby Level

2:00 PM – 6:00 PM

MP1: Automatically Improving Empirical Performance: Algorithm Configuration and Selection

*Frank Hutter, Lars Kotthoff, Yuri
Malitsky, Barry O'Sullivan,
and Lin Xu*
Evergreen A/B, Lobby Level

MP2: Equilibrium Computation

Nicola Gatti, Troels Bjerre Sorensen
Evergreen C, Lobby Level

MP3: Moving Agents in a Graph

Adriaan ter Mors
Evergreen G/H, Lobby Level

MP4: Semantic Web Rules: Fundamentals, Applications, and Standards

*Benjamin Grosz, Mike Dean, and
Michael Kifer*
Evergreen F, Lobby Level

Workshop Program

Registration for a workshop requires a supplemental fee for AAAI-13 technical registrants.

Individuals who do not wish to participate in any other AAAI-13 programs or events may elect the workshop only registration fee.

Sunday and Monday, July 14 – 15 (Two Days)

W6: Intelligent Robotic Systems

Larch, 3rd Floor, Hyatt

Sunday: 8:45 AM – 6:00 PM

Monday: 9:30 AM – 5:00 PM

Sunday, July 14

W1: Activity Context-Aware System Architectures

Laurel, 3rd Floor, Hyatt

8:30 AM – 5:00 PM

W2: Artificial Intelligence and Robotics Methods in Computational Biology

Madrona, 3rd Floor, Hyatt

9:00 AM – 5:30 PM

W3: Second Workshop on Combining Constraint Solving with Mining and Learning

Juniper, 3rd Floor, Hyatt

9:00 AM – 1:00 PM

W4: Computer Poker and Imperfect Information

Maple, 3rd Floor, Hyatt

9:00 AM – 6:00 PM

W10: Space, Time, and Ambient Intelligence

Cottonwood, 3rd Floor, Hyatt

9:00 AM – 6:00 PM

Monday, July 15

W5: Expanding the Boundaries of Health Informatics Using AI

Laurel, 3rd Floor, Hyatt

8:55 AM – 6:30 PM

W7: Intelligent Techniques for Web Personalization and Recommendation

Cottonwood, 3rd Floor, Hyatt

9:15 AM – 5:15 PM

W8: Learning Rich Representations from Low-Level Sensors

Maple, 3rd Floor, Hyatt

8:30 AM – 6:00 PM

W9: Plan, Activity, and Intent Recognition

Madrona, 3rd Floor, Hyatt

9:00 AM – 5:30 PM

W11: Trading Agent Design and Analysis

Regency E, 2nd Floor, Hyatt

9:15 AM – 5:00 PM

W12: Statistical Relational Artificial Intelligence?

Juniper, 3rd Floor, Hyatt

9:00 AM – 6:00 PM

Special Technical Program Features

Full Paper Technical Poster Presentations

All authors of technical program papers will also present their research in poster format during the daily afternoon poster sessions, July 16–18 in the Evergreen Ballroom and Foyer, Lobby Level. Please take a moment to visit the posters and take advantage of this opportunity to probe deeper into the work presented orally the same day. Technical posters sessions will begin at 3:45 PM each day in conjunction with the afternoon coffee break.

New! Late-Breaking Technical Papers

New to AAAI this year, the Late-Breaking papers track features 52 papers that showcase, novel, exciting, ongoing work that was initiated, enhanced, improved, or completed after the original paper submission deadline. Late-Breaking papers will be presented in oral lightning sessions in the technical session rooms at 12:20 – 12:30 PM, July 16–18, and then in poster format during the conference-wide afternoon poster sessions at 3:45 PM, July 16–18 in the Evergreen Ballroom and Foyer, Lobby Level in conjunction with the afternoon coffee break. For schedule information, please consult the online schedule or the grid elsewhere in this program. Late-Breaking papers are included in a special AAAI technical report on the conference proceedings flash drive.

New! Senior Member Track

The Senior Member Presentation Track provides an opportunity for established researchers to give a broad talk on a well-developed body of research or an important new research area, providing a “big picture” view. The 2013 program includes a prestigious collection of speakers on a diverse number of topics, including Bruce Buchanan and Reid Smith; Kobi Gal; Henry Kautz; Tuomas Sandholm; Manuela Veloso; and Fusun Yaman, Aaron Adler, and Jacob Beal. The Senior Member presentations will be held each day in Evergreen Ballroom B, Lobby Level. For schedule information, please consult the online schedule or the grid elsewhere in this program.

New! Classic Paper Award Presentations

Each year, AAAI selects one or more paper for the AAAI Classic Paper Award, which honors the author(s) of paper(s) deemed most influential, chosen from a specific conference year. The winners of the 2013 awards for papers presented at AAAI-94 have been invited to give special presentations at this year’s conference. Jean-Charles Regin and Anthony Cassandra, will speak on Wednesday, July 17, at 10:20 AM in Evergreen Ballroom B, Lobby Level.

AAAI-13 Poster Session

The AAAI-13 Poster Session will be held Tuesday, July 16, from 5:45 – 7:30 PM. The AAAI-13, Student Abstract, Doctoral Consortium, and Poker Competition posters will be included in this poster session, located in the Evergreen Ballroom on the Lobby Level.

EAAI-13 Posters

“Paradigms of AI Programming” in Python
Daniel Connelly, Ashok K. Goel

Student-Friendly Java-Based Multiagent Event Handling
Dan Tappan

Pre-PhD Student Abstracts

Adverse Provision in Multiple Prospect Selection Problems
Amos Azaria, Sarit Kraus

A Maximum K-Min Approach for Classification
Mingzhi Dong, Liang Yin

Does One-Against-All or One-Against-One Improve the Performance of Multiclass Classifications?
R. Kyle Eichelberger, Victor S. Sheng

Selecting the Appropriate Consistency Algorithm for CSPs Using Machine Learning Classifiers
Daniel J. Geschwender, Shant Karakashian, Robert J. Woodward, Berthe Y. Choueiry, Stephen D. Scott

A Mediation Mechanism for Automated Negotiating Agents Whose Utility Changes over Time
Keisuke Hara, Takayuki Ito

The Role of Complex Network Dynamics in the Emergence of Multiagent Coalition
Mohammad Rashedul Hasan, Anita Raja

Hybrid Model-Based Diagnosis of Web Service Compositions
Zhichun Jia, Rong Chen

Phase Transition and Network Structure in Realistic SAT Problems
Saumya C. Kambhampati, Thomas Liu

Locate the Hate: Detecting Tweets against Blacks
Irene Kwok, Yuzhou Wang

Crowd Formalization of Action Conditions
Walter S. Lasecki, Leon Weingard, Jeffrey P. Bigham, George Ferguson

Trading Space for Time in Grid-Based Path Finding
William Lee, Ramon Lawrence

Online Group Feature Selection from Feature Streams
Haiguang Li, Xindong Wu, Zhao Li, Wei Ding

Making Simple Tabular Reduction Works on Negative Table Constraints
Hongbo Li, Yanchun Liang, Jinsong Guo, Zhanshan Li

Subchloroplast Location Prediction via Homolog Knowledge Transfer and Feature Selection
Xiaomei Li, Xindong Wu, Gongqing Wu, Xuegang Hu

An Effective Approach for Imbalanced Classification: Unevenly Balanced Bagging
Guohua Liang, Anthony G. Cohn

A First-Order Logic Based Framework for Verifying Simulations
Hui Meen Nyew, Nilufer Onder, Soner Onder, Zhenlin Wang

Concurrent Reasoning with Inference Graphs
Daniel R. Schlegel, Stuart C. Shapiro

Simplified Lattice Models for Protein Structure Prediction: How Good Are They?
Swakkhar Shatabda, M. A. Hakim Newton, Abdul Sattar

Graphical Model-Based Learning in High Dimensional Feature Spaces
Zhao Song, Yuke Zhu

On a Noun-Driven Syntactic Paradigm
Lauren M. Stuart, Julia M. Taylor, Victor Raskin

Empirical Comparison of Multi-Label Classification Algorithms
Clifford A. Tawiah, Victor S. Sheng

WordNet Based Multi-Way Concept Hierarchy Construction from Text Corpus
Ding Tu, Ling Chen, Gencai Chen

Personalized Recommendation Based on Co-Ranking and Query-Based Collaborative Diffusion
Xiao Yang, Zhaoxin Zhang, Qiang Wang

Imbalanced Multiple Noisy Labeling for Supervised Learning
Jing Zhang, Xindong Wu, Victor S. Sheng

Planning with Multi-Valued Landmarks
Lei Zhang, Chong-jun Wang, Jun Wu, Meilin Liu, Junyuan Xie

Doctoral Consortium Abstracts

Understanding Descriptions of Visual Scenes Using Graph Grammars
Daniel Bauer

Artificial Conversational Companions
Sviatlana Danilava

Distribution Kernel Methods for Multiple-Instance Learning
Gary Doran

Backdoors to Tractability of Answer-Set Programming
Johannes Klaus Fichte

An Optimal Task Assignment Policy and Performance Diagnosis Strategy for Heterogeneous Hadoop Cluster
Shekhar Gupta

Creating Model-Based Adaptive Environments Using Game-Specific and Game-Independent Analytics
Brent Harrison

Heuristic Search for Large Problems with Real Costs
Matthew Hatem

Crowdsourcing for Deployable Intelligent Systems
Walter S. Lasecki

Multiagent Stochastic Planning with Bayesian Policy Recognition
Alessandro Panella

Efficient Algorithms for Strong Local Consistencies in Constraint Satisfaction Problems
Anastasia Paparrizou

Optimization of Heterogeneous Computing Resources for Robotic Mapping
Adrian Ratter

The Wisdom of Crowds in Bioinformatics: What Can We Learn (and Gain) from Ensemble Predictions?
Mariana Recamonde Mendoza

Concurrent Inference Graphs
Daniel R. Schlegel

Multi-Strategy Learning of Robotic Behaviours via Qualitative Reasoning
Timothy Wiley

Steps Towards a Science of Heuristic Search
Christopher Wilt

Tools for Preference Reasoning
Ying Zhu

AAAI-13 Poker Symposium Posters

Online Implicit Agent Modelling
Nolan Bard, Michael Johanson, Neil Burch, Michael Bowling (University of Alberta)

Hyperborean 2013
Michael Bowling, Duane Szafron, Chris Archibald, Nolan Bard, Neil Burch, Josh Davidson, Trevor Davis, Richard Gibson, John Hawkin, Michael Johanson, Dustin Morrill (University of Alberta)

Action Translation in Extensive-Form Games with Large Action Spaces: Axioms, Paradoxes, and the Pseudo-Harmonic Mapping
Sam Ganzfried and Tuomas Sandholm (Carnegie Mellon University) (CMU)

Improving Performance in Imperfect-Information Games with Large State and Action Spaces by Solving Endgames
Sam Ganzfried and Tuomas Sandholm (Carnegie Mellon University)

AAAI-13 Exhibit Program

The exhibit program will be held Tuesday – Thursday, July 16–18, in the Grand Ballroom Foyer.

Exhibit hours will be:

Tuesday, July 16

10:00 AM – 12:30 PM and 1:45 PM – 5:45 PM

Wednesday, July 17

10:00 AM – 12:30 PM and 1:45 PM – 5:45 PM

Thursday, July 18

10:00 AM – 12:30 PM

Exhibitors

AAAI Press

2275 East Bayshore Road, Suite 160
Palo Alto, CA 94303
650-328-3123
info13@aaai.org
aaai.org/Press/press.php

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aaai.org/aitopics

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Registration

Conference registration is located on the second floor of the Hyatt Regency Bellevue Hotel, beginning Sunday, July 14. Registration hours are:

Sunday, July 14	7:30 AM – 5:00 PM
Monday, July 15	7:30 AM – 5:00 PM
Tuesday, July 16	8:00 AM – 5:00 PM
Wednesday, July 17	8:30 AM – 5:00 PM
Thursday, July 18	8:30 AM – 12:00 PM

AAAI attendees who wish to register onsite will be asked to complete an onsite form, and then process their own registration at the AAAI-13 registration site: www.regonline.com/aaai within the following 24-hour period. They will be issued a badge at the time that they complete the form. For a list of registration rates, please see www.aaai.org/Conferences/AAAI/2013/aaai13registration.php or visit onsite registration. Attendees who select not to use the online system will be required to pay by check or cash onsite.

General Information

ADA Devices

The staff at the Hyatt Regency Bellevue Hotel 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. Smoking is not allowed in any of the technical, tutorial, workshop, IAAI, or EAAI sessions.

Banking

There is a Chase Bank next door to the Hyatt and a Bank of America is located across the street from the hotel. In addition to these banks, the front desk of the Hyatt provides currency exchange.

Business Center/Shipping

There is a self-service business center located on the Lobby Level of the hotel. A credit card payment is required for all services. Fed Ex/Kinko's is located three blocks from the Hyatt.

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.

Dining

The Hyatt Regency Bellevue features Eques, a regionally inspired breakfast restaurant. The menu features a breakfast buffet, as well as a full breakfast menu, featuring fresh produce grown at local farms. Monday – Friday, 6:30 AM – 10:00 AM, Saturday and Sunday, 7:00 AM – 12:00 PM. Other convenient outlets include Tully's Coffee, Needs Deli, and Zen Express.

The hotel is also adjacent or near 45 dining op-

tions in downtown Bellevue. A flyer containing a listing and map of local restaurants is included in the registration bags. Please also visit the hotel website or concierge for more information.

Hotel Reservations

For information regarding hotel reservations, please contact the hotel directly.

Internet Access

AAAI has arranged for complimentary wireless Internet access for all AAAI-13 registrants in the Hyatt meeting spaces and guest rooms. Overnight guests will be provided with login information upon check-in.

To access the meeting room wireless, please connect to HYATT-MEETING access point and open your web browser. You will be prompted for an access code, which is AAAI13 (case sensitive). If you have any challenges accessing the Internet please call (425) 864-5109 or use a house phone and dial 0 and ask for AV to be paged.

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

Self Parking at the Hyatt Regency Bellevue is \$25 and Valet Parking is \$29 (plus applicable taxes, currently 9.5 percent) per day for Sunday night through Thursday nights. Friday and Saturday night stays are complimentary (8 PM Friday until 12 AM Sunday).

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 / Technical Report Flash Drive

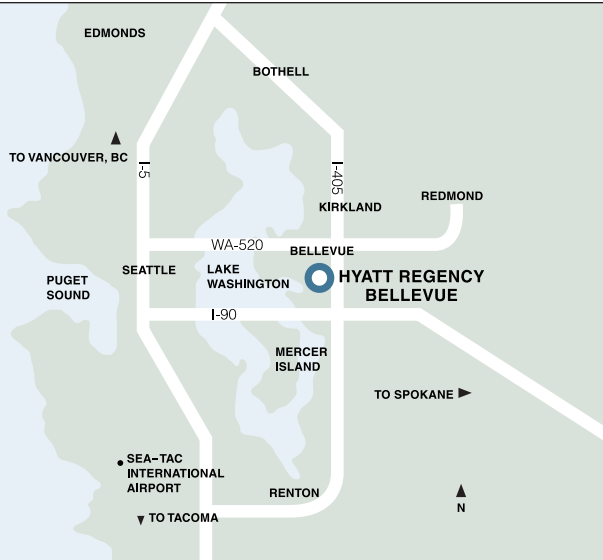
Upon registration, all technical registrants will receive a flash drive that contains the AAAI-13/IAAI-13/EAAI-13 Proceedings, Late-Breaking Paper Technical Report, and Workshop Technical Reports.

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

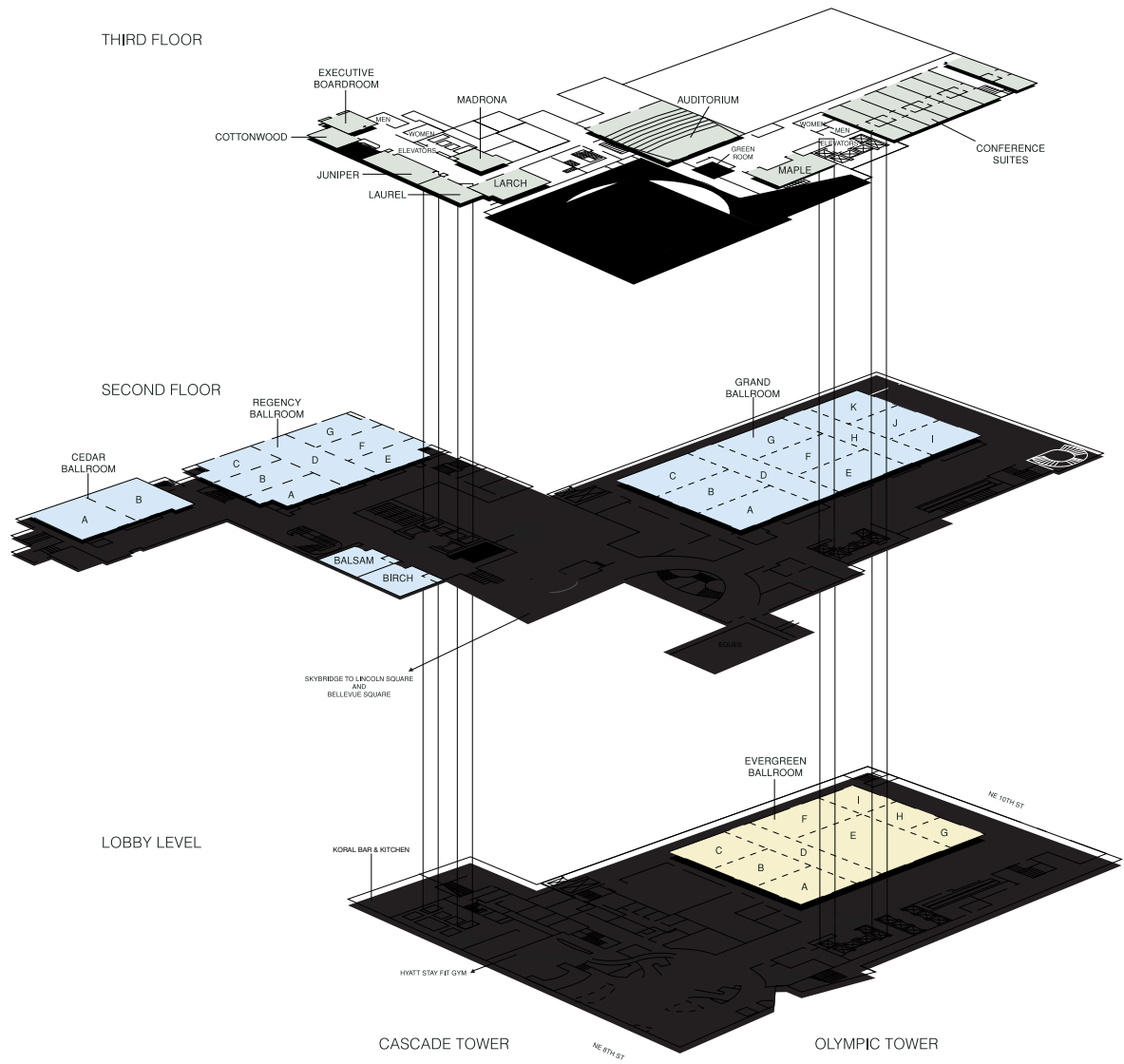
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Hyatt Regency Bellevue

On Seattle's Eastside

DIRECTIONS
 Directions from Sea-Tac Int'l Airport (17 miles): Follow signs to "All Freeways". Take Hwy. 518 to 405 North to Bellevue for 14 miles. Exit onto NE 8th St. West (exit #13B). Follow NE 8th for 6 1/2 blocks. Hotel is on right after crossing 106th Ave, at corner of NE 8th and Bellevue Way.



05.12



AIIDE-13 Moves to Boston!

October 14-18, 2013
Northeastern University
Boston, Massachusetts USA

AIIDE is the definitive point of interaction between entertainment software developers interested in AI and academic and industrial AI researchers. This AAAI conference is targeted at both the research and commercial communities, promoting AI research and practice in the context of interactive digital entertainment systems with an emphasis on commercial computer and video games. AIIDE invites researchers and developers to share insights and cutting-edge results from a wide range of AI-related problems and encourage the presentation of results from core AI research areas applicable to interactive digital entertainment and AI approaches developed and fielded in commercial systems.

The program will include invited speakers, research and practitioner presentations, playable experiences, project demonstrations, interactive poster sessions, product exhibits, and a doctoral consortium. A current list of invited speakers includes Richard Evans (Linden Lab), D. Fox Harrell (MIT), Aleissia Laidacker (Ubisoft Montreal), and John Abercrombie (Irrational Games).

www.aiide.org



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6–10 November 2013

The First AAAI Conference on Human Computation and Crowdsourcing (HCOMP-2013) will be held November 6-10, 2013 in Palm Springs, California, USA. The conference is aimed at promoting the scientific exchange of advances in human computation and crowdsourcing among researchers, engineers, and practitioners across a spectrum of disciplines. The conference was created by researchers from diverse fields to serve as a key focal point and scholarly venue for the review and presentation of the highest quality work on principles, studies, and applications of human computation. The meeting seeks and embraces work on human computation and crowdsourcing in multiple fields, including human-computer interaction, cognitive psychology, economics, information retrieval, economics, databases, systems, optimization, and multiple subdisciplines of artificial intelligence, such as vision, speech, robotics, machine learning, and planning.