### Sponsoring Organizations

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### AAAI-13 Conference Committee

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- David Stracuzzi (Sandia National Laboratories, USA)

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- Gabe Alvarez (Stanford University)
- Dustin Fink (Stanford University)

**Computer Poker Competition Cochairs**
- Neil Burch (University of Alberta, Canada)
- Eric Jackson

**AI Video Competition Chair**
- Ioannis Vetsikas

**AAAI-13 Local Arrangements Cochairs**
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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
SMILE: Shuffled Multiple-Instance Learning
Gary Doron, Soumya Ray

Honoroble Mention

On the Value of Using Group Discounts under Price Competition
Reehof Meir, Tyler Lu, Moshe Tenenholz, Craig Boutilier
For outstanding technical quality and clarity of presentation
PAC Optimal Exploration in Continuous Space
Markov Decision Processes
Jason Pucci, Ronald Parr
For outstanding formal analysis
Sensitivity of Diffusion Dynamics to Network Uncertainty
Abhijit Adiga, Chris Kuhlman, Henning S. Mortveit, Anil Kumar S. Vallikanti
For outstanding novelty of research question
Effective Bilingual Constraints for Semi-Supervised Learning of Named Entity Recognizers
Mengjia Wang, Wuxiang 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)
Neil Yorke-Smith (American University of Beirut, Lebanon)

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Steven Okamoto (Ben-Gurion University of the Negev, Israel)
Gabriele Röger (University of Basel, Switzerland)

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 chair 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. Engelmore Memorial Award and Lecture

The Robert S. Engelmore Award is sponsored by AAAI-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. Engelmore’s extraordinary service to AAAI, AI Magazine, and the AI applications 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 Finn (University of Maryland, Baltimore County)
Lise Getoor (University of Maryland)
Sven Koenig (University of Southern California)
Lillian Lee (Cornell University)
Gerald J. Tesauro (IBM TJ Watson Research Center)
Miroslaw Truszczynski (University of Kentucky)
Qiang Yang (Hong Kong University of Science and Technology)
AAA13 Social Events

Opening Reception
The AAA13 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 AAA13 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 AAA13 Invited Talk by Larry Hunter in Evergreen Ballroom A.

AAA13 Poster Session Reception
A poster session featuring Student Abstracts, Doctoral Consortium Abstracts, AAA13 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 AAA13 registrants. A $50.00 per person fee ($25.00 for children) will be charged for spouses and other nontechnical conference registrants.

NEW! AAA13 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.

AAA13 Banquet
The AAA13 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.

AAA13 Student Programs

AAA13 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.

AAA/SIGART Doctoral Consortium (DC-13)
The DC schedule appears on page 6.
The Eightheenth 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 AAA13 evening Poster Session on Wednesday, July 17. All interested AAA13 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.

AAA13 Fellow / Student Lunches
First held in 2006, this program provides an opportunity for a small number of students to chat with an 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 on site 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 Rychticky (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 Régis
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

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.

AAA13 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-
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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 autograding, 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, Matthijs Kanda, 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

1:45 PM – 2:30 PM

**Panel:**
Educational Repositories for Teaching AI
Panelists: Ed Fox, Lois Dekimbre, 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

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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
Shehdir Gupta

4:00 PM – 4:40 PM
Sviatlana Danilava

7:00 PM
DC Dinner: Tap House Grill, Bellevue

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**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 EAAI-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 Birat-tari, 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 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 colocated 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.

### Special Meetings

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<td>The AAAI Annual Business Meeting will be held Monday, July 15, 1:15 – 1:45 PM, Evergreen A, Lobby Level</td>
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<td><strong>AAAI Conference Committee Meeting</strong></td>
<td>AAAI Conference Committee Meeting will be held Wednesday, July 17, 7:45 – 8:45 AM, Maple, 3rd Floor</td>
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<td><strong>AAAI Executive Council Meeting</strong></td>
<td>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.</td>
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<td><strong>AAAI Publications Committee Meeting</strong></td>
<td>The AAAI Publications Committee Meeting will be held Tuesday, July 16, 12:30 PM – 2:00 PM.</td>
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<td><strong>AI Magazine Editorial Board Meeting</strong></td>
<td>The AI Magazine Editorial Board Meeting will be held Wednesday, July 17, 12:30 – 2:00 PM, Executive Boardroom, 3rd Floor.</td>
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<td><strong>JAIR Editorial Board Meeting</strong></td>
<td>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.</td>
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All AAAI-13 and IAAI-13 Invited Talks, July 14 – 16 will be held in Grand Ballroom A, Second Floor, unless otherwise noted. (AAAI-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 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 biomedicine, and 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

AAAI 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

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

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

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.
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 Co-chairs

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. Matarić (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 adaptation 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.
## Grand Ballroom A

### 8:30 – 9:00 AM

**AAAI-13 / IAAI-13 Opening Ceremony**

AAAI Welcome and Award Presentations (Michael Littman and Marie desJardins, AAAI-13 Program Co-chairs)

Computational Sustainability Paper Awards (Doug Fisher and Carla Gomes)

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### 9:00 – 10:00 AM

**COFFEE BREAK, 10:00 – 10:20 AM**

### 10:20 – 11:20 AM

**AAAI-13 Keynote Address**

Grounded Language Learning

*Raymond Mooney (University of Texas at Austin)*

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### 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, Hsi Qian, Wei Chen, Zhihua Zhang

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

- Continuous Conditional Random Fields for Efficient Regression in Large Fully Connected Graphs
  - Kosta Batrovski, Vladan Radomanovic, Slobadan Vuicetic, Zoran Obradovic

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**AAAI-13: Sentiment and Recommendation**

- The Automated Acquisition of Suggestions from Tweets
  - Li Dong, Furu Wei, Yajuan Du, Xianhua Liu, Ming Zhou, Ke Xu

- A Hierarchical Aspect-Sentiment Model for Online Reviews
  - Sain Kim, Juwenn Zhang, Zhong 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

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**AAAI-13: Markets and Preferences**

- Instructor Rating Markets
  - Mithun Chakraborty, Sanmay Das, Allen Lavoie, Malik Magdon-Ismail, Yonatan Nisan

- 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, Michal Truszczynski, Stefan Woltran

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**Late-Breaking Papers**

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

- Algorithm Selection in Bilateral Negotiation
  - Litao Ilaye, Yaakov (Kobi) Gal

- RProp: Ranking Tweets by Exploiting the Tweet/User/Web Ecosystem and Inter-Tweet Agreement
  - Sriraj Ravi Kumar, Kartik Talukdar, Bajju 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
  - Isolanda Leite, Hannaneh Hajishirzad, Sean Andreit, Jill F. Lehman

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

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

- Towards Joint Inference for Complex Ontology Matching
  - Christian Metzlicto, 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

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**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, Rezaei Meir, Madhu 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
  - Claudiu Cristian Musat, Boi Faltings

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**Lunch, 12:30 – 1:45 PM**
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<thead>
<tr>
<th>Time</th>
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<th>Session</th>
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<tbody>
<tr>
<td>8:30 – 9:00 AM</td>
<td>GRAND BALLROOM I</td>
<td>8:30 – 9:00 AM</td>
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</table>
| 9:00 – 10:00 AM | GRAND BALLROOM J | 9:00 – 10:00 AM Bluetooth and Causal Effect from Multiple Environments  
Sanghack Lee, Vasant Honavar |
Jan Noessner, Matthias Niepert, Heiner Stuckenschmidt |
Elias Bareinboim, Judea Pearl |
| 12:20 – 12:30 PM | EVERGREEN BALLROOM B | 12:20 – 12:30 PM Lunch |
| 12:30 – 1:45 PM | EVERGREEN BALLROOM A | 12:30 – 1:45 PM Lunch |

**COFFEE BREAK, 10:00 – 10:20 AM**

**LUNCH, 12:30 – 1:45 PM**

**AAAI-13:**
Bayesian Inference and Causality  
Reduce and Re-Lift: Bootstrapped Lifted Likelihood Maximization for MAP  
Fabian Hadiji, Kristian Kersting  
m-Transportability: Transportability of Causal Effect from Multiple Environments  
Sanghack Lee, Vasant Honavar  
RockIt: Exploiting Parallelism and Symmetry for MAP Inference in Statistical Relational Models  
Jan Noessner, Matthias Niepert, Heiner Stuckenschmidt  
Causal Transportability with Limited Experiments  
Elias Bareinboim, Judea Pearl

**AAAI-13 (Cognitive Systems):**
Knowledge-Based Systems  
Graph Traversal Methods for Reasoning in Large Knowledge-Based Systems  
Abhishek Sharma, Kenneth D. Forbus  
Automatic Extraction of Efficient Axiom Sets from Large Knowledge Bases  
Abhishek Sharma, Kenneth D. Forbus  
Preemptive Strategies for Overcoming the Forgetting of Goals  
Justin Li, John Laird  
Learning to Efficiently Pursue Communication Goals on the Web with the GOSMR Architecture  
Kevin Gold

**AAAI-13: Spotlights and Senior Members (SMP):**
SOCS: What’s Hot  
Wheeler Ruml  
SOCS: Challenges  
Bob Holte  
AAMAS: Challenges  
Gal Kaminka  
SDM: Best Paper: Triadic Measures on Graphs: The Power of Wedge Sampling  
C. Seshadhri

**IAAI-13: Deployed Application of Machine Learning:**
Deployed: An Antimicrobial Prescription Surveillance System that Learns from Experience  
Mathieu Beaudoin, Froduald Kabanza, Vincent Nault, Louis Valiquette  
Deployed: GRADE: Machine Learning Support for Graduate Admissions  
Austin Waters, Risto Miikkulainen

**Late-Breaking Papers:**
Throwing Darts: Random Sampling Helps Tree Search When the Number of Short Certificates is Moderate  
John P. Dickerson, Tuomas Sandholm  
A Formal Framework for the Specification, Verification and Synthesis of Diagnosers  
Marco Bozzano, Alessandro Cinati, Marco Gario, Stefano Tonetta  
Scaling-Up Quadratic Programming Feature Selection  
Yamuna Pruad, K. K. Biswas, Parag Singla  
Cotraining Based Bilingual Sentiment Lexicon Learning  
Dohong Gao, Furu Wei, Wenjie Li, Xiaohua Liu, Ming Zhou  
Adversarial Cooperative Path-Finding: A First View  
Marika Ivanovpar, Pavel Surynek

**IAAI-13:**
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<td>AAAI-13 Invited Talk:</td>
<td>Aerial Robot Swarms</td>
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<td>Vijay Kumar (University of Pennsylvania)</td>
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<td>2:45 – 3:45 PM</td>
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<td>TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM</td>
<td>Evergreen Ballroom and Foyer</td>
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<td>4:45– 5:45 PM</td>
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<td>AAAI-13: Clustering</td>
<td>Smart Multi-Task Bregman Clustering and Multi-Task Kernel Clustering</td>
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<td>Xianchao Zhang, Xiaotong Zhang</td>
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<td>Spectral Rotation versus K-Means in Spectral Clustering</td>
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<td>Jin Huang, Feiping Nie, Heng Huang</td>
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<td>Unsupervised Cluster Matching via Probabilistic Latent Variable Models</td>
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<td>Tomoharu Iwata, Tatsunori Hirose, Naomori Ueda</td>
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<td>Clustering with Complex Constraints — Algorithms and Applications</td>
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<td>Weifeng Zhi, Xiang Wang, Baysie Qian, Patrick Butler, Naren Ramakrishnan, Ian Davidson</td>
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<td>5:45 – 7:30 PM</td>
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<td>AAAI-13: Reinforcement Learning</td>
<td>Multi-Armed Bandit with Budget Constraint and Variable Costs</td>
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<td>Wenkai Dong, Tao Qin, Xu-Dong Zhang, Tie-Yan Liu</td>
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<td>Basis Adaptation for Sparse Nonlinear Reinforcement Learning</td>
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<td>Preuning for Monte Carlo Reinforcement Learning in Decentralized POMDPs</td>
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<td>Biplas Mitra, Georgios Theodoratos</td>
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<td>AAAI-13: Options/Pricing</td>
<td>Robust Discrete Matrix Completion</td>
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<td>Rank Aggregation via Low-Rank and Structured-Sparse Decomposition</td>
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<td>Yan Pan, Hanjiang Lai, Cong Liu, Yong Tang, Shuicheng Yan</td>
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<td>AAAI-13 STUDENT / EAAI / POKER POSTER SESSION</td>
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<td>AAAI-13: Recognition and Detection</td>
<td>Incremental Learning Framework for Indoor Scene Recognition</td>
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<td>Aram Kamkong, Rupesh Pimpup, Osaka Hanegawa</td>
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<td>Video Saliency Detection via Dynamic Consistent Spatio-Temporal Attention Modelling</td>
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<td>Gradient Networks: Explicit Shape Matching without Extracting Edges</td>
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<td>Edward Hsin, Martial Hebert</td>
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<td>Vesselness Features and the Inverse Compositional AAM for Robust Face Recognition Using Thermal IR</td>
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<td>Reza Shinsa Ghas, Ognjen Arandjelovic, Hakim Bendala, Xavier Maldague</td>
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1:45 – 2:45 PM

GRAND BALLROOM I

AAAI-13 (Cognitive Systems):
Situated Interaction
Integrating Programming by Example and Natural Language Programming
Mehdi Manshadi, Daniel Gildea, James Allen
A Hybrid Architectural Approach to Understanding and Appropriately Generating Indirect Speech Acts
Gordon Briggs, Matthias Schütz
An Agent Model for the Appraisal of Narrative Events Based in In-Group and Out-Group Relations
Yngve Ferreira, Samuel Mancarenhas, Ana Paiva, Gennaro Di Tosto, Frank Dignum, John McBreer, Nick Dogo, Gert Jan Hofsteede, Giulia Andrigetto, Rosaura Conte
SALL-E: Situated Agent for Language Learning
Ian Perera, James F. Allen

GRAND BALLROOM J

AAAI-13 (AI and the Web):
Crowdsourcing
Better Human Computation through Principled Voting
Andrew Mao, Ariel D. Procaccia, Yiling Chen
Clustering Crowds
Hiroshi Kazuno, Yuta Tsuboi, Hsueh-Ku Kashiwa
The Effects of Performance-Contingent Financial Incentives in Online Labor Markets
Ming Yin, Yiling Chen, Yu-An Sun
Hotspotting — A Probabilistic Graphical Model for Image Object Localization through Crowdsourcing
Mahyar Salek, Yoram Bachrach, Peter Key

EVERGREEN BALLROOM B

AAAI-13: Spotslights and Senior Members (SMP)

AAAI-13: Logic and Answer Set Programming
A General Formal Framework for Pathfinding Problems with Multiple Agents
Eira Erdem, Doga Güzem Kisa, Umut Ozkok, Peter Schüller
Multi-Cycle Query Caching in Agent Programming
Natascha Alschina, Tristan Behrens, Mehdi Dastani, Koen Hindriks, Jomí Fred Hubner, Brian Logan, Hai H. Nguyen, Marc van Zee
Liberal Safety for Answer Set Programs with External Sources
Thomas Eiter, Michael Fink, Thomas Krennwallner, Christoph Reh
Domain-Specific Heuristics in Answer Set Programming
Martin Gebser, Benjamin Kaufmann, Ramon Otero, Javier Romero, Torsten Schaub, Philipp Wanko

AAAI-13: Spotlights and Senior Members (SMP)

AAAI-13: Constraint-Based Scheduling
Deployed: The Deployment of a Constraint-Based Dental School Timetabling System
Hadrien Cambazard, Barry O’Sullivan, Helmut Simonis
Emerging: Train Outstable Scheduling as Constraint Satisfaction
Andy Hou Wai Chun
Emerging: Balancing the Traveling Tournament Problem for Weekday and Weekend Games
Richard Tashiro, Ken-Ichi Kawaihayaushi (4:45 – 5:55)

EVERGREEN BALLROOM A

AAAI-13 STUDENT / EAAI / POKER POSTER SESSION

AAAI-13 PUZZLE HUNT

8:00 – 10:00 PM

AAAI-13: Spotlights and Senior Members (SMP)

AAAI-13: Monitoring and Response Systems
Emerging: Timed Probabilistic Automaton: A Bridge between Raven and Song Scope for Automatic Species Recognition
Shaofei Duan, Jiaogang Zhang, Paul Roe, Jason Wimmer, Xueyan Dong, Anthony Traueking, Michael Tuvece
Emerging: Multiagent Router Throttling: Decentralized Coordinated Response against DDoS Attacks
Kleanthis Malalis, Daniel Kudenko
Emerging: Scalable Randomized Patrolling for Securing Rapid Transit Networks
Pradeep Varakantham, Hoong Chuin Lau, Zhi Yuansheng
### COFFEE BREAK. 10:00 – 10:20 AM

#### AAAI-13: IAAI Robert S. Engelmore Award Lecture
**Giving Data a Voice**
Deborah McGuinness (Rensselaer Polytechnic Institute)

#### AAAI-13: AI in Science
**Mixed Heuristic Local Search for Protein Structure Prediction**
Swakkhar Shatalova, M. A. Hakim Newton, Abdul Sattar

**Ranking Scientific Articles by Exploiting Citations, Authors, Journals, and Time Information**
Yujing Wang, Yunbai Tong, Ming Zeng

**A Morphogenetically Assisted Design Variations Tool**
Aaron Adler, Furen Yamen, Jacob Real, Jeffrey Cleveland, Hala Mostafa, Annan Mozeika

**Guiding Scientific Discovery with Explanations using DEMUD**
Kori L. Wigington, Nina L. Lanza, David R. Thompson, Thomas G. Dietterich, Martha S. Gilmore

#### AAAI-13: Nearest Neighbors and Hierarchical Clustering
**Discovering Hierarchical Structure for Sources and Entities**
Aditya Pal, Nilesh Dalvi, Kedar Bellare

**Walking on Minimax Paths for k NN Search**
Kye-Hyon Kim, Seungjin Choi

**Formalizing Hierarchical Clustering as Integer Linear Programming**
Sean Gilpin, Siegfried Nijssen, Jan Davidson

**Reciprocal Hash Tables for Nearest Neighbor Search**
Xiaofeng Liu, Jianfeng He, Bo Lang

#### AAAI-13: Planning
**Hypothesis Exploration for Malware Detection Using Planning**
Shirin Sobrabi, Octavian Udrea, Anton Raabow

**Red-Black Relaxed Plan Heuristics**
Michael Katz, Jörg Hoffmann, Carmel Domshlak

**Truncated Incremental Search: Faster Re-planning by Exploiting Suboptimality**
Sandip Aine, Maxim Likhachev

**A First-Order Formalization of Commitments and Goals for Planning**
Felipe Meneguzzi, Pankaj K. Telang, Munindar P. Singh

#### AAAI-13: Bribery / Voting
**Computational Aspects of Nearly Single-Peaked Electorates**
Gabor Erdélyi, Martin Lackner, Andreas Pfau

**Ties Matter: Complexity of Manipulation when Ties-breaking with a Random Vote**
Harris Kutt, Serge Gaspers, Nicholas Mattei, Nina Narodytska, Toby Walsh

**Bribery in Voting with Soft Constraints**
Maria Silvia Pini, Francesca Rossi, Kristen Brent Venable

**How Bad Is Selfish Voting?**
Simona Brãnci, Ioannis Caragiannis, Jamie Morgenstern, Ariel D. Procaccia

#### Late-Breaking Papers
**Multiple Outcome Supervised Latent Dirichlet Allocation for Expert Discovery in Online Forums**
Jose San Pedro, Alexandra Karatzoglou

**Supervised Topic Model with Consideration of User and Item**
Sheng Wang, Fangtao Li, Ming Zhang

**Combining CP-Nets with the Power of Ontologies**
Tomasz Di Noto, Thomas Lukasiewicz

**Negative Influence Minimization by Blocking Nodes in Social Networks**
Senseung Wang, Xuanjian Zhao, Yan Chen, Zhouyuan Li, Kai Zhang, Jiali Xia

**Comprehensive Cross-Hierarchy Cluster Agreement Evaluation**
David M. Johnson, Caiming Xiong, Jing Gao, Jason J. Corso

**Strong Nash Equilibrium Is in Smoothed P**
Nicola Gatti, Marco Rocco, Tuomas Sandholm

**Verbal IQ of a Four-Year Old Achieved by an AI System**
Stellan Ohlsson, Aaron Urasky, Robert H. Sloan, György Turán

**Approximation of Lorenz-Optimal Solutions in Multiobjective Markov Decision Processes**
Patrice Perry, Paul Weng, Judy Goldsmith, Josiah P. Hanna

**Covering Landmark Interactions for Semantically Diverse Plans**
Daniel Bryce, Renée C. Bryce

#### AAAI-13: Teamwork
**Cost-Optimal Planning by Self-Interested Agents**
Baz Nissim, Ronen I. Brafman

**Teamwork with Limited Knowledge of Teammates**
Samuel Barrett, Peter Stone, Sarit Kraus, Avi Rosenfeld

**Composition Games for Distributed Systems: The EU Grant Games**
Shay Katten, Ron Lavi, Amos Teg拦

**Information Sharing under Costly Communication in Joint Exploration**
Igor Bodekins, David Serna

#### AAAI-13: Situation Calculus and STRIPS
**Multiagent Knowledge and Belief Change in the Situation Calculus**
Liangda Fang, Yongmei Liu

**Progression of Decomposed Situation Calculus Theories**
Denis Pomorsky, Mikhail Soutchanski

**Data-Parallel Computing Meets STRIPS**
Erez Karpas, Tomer Sagi, Carmel Domshlak, Argyder Gal, Avi Mendelson, Moritz Tenenboim

**Reasoning about Saturated Conditional Independence under Uncertainty: Axioms, Algorithms and Levesque’s Situations to the Rescue**
Sebastian Link

#### Late-Breaking Papers
**Conditional Outlier Approach for Detection of Unusual Patient Care Actions**
Mihos Hauskrecht, Shyam Venkateswaran, Gregory Ferguson, Gilles Clermont

**Discriminative Multi-Task Feature Selection**
Yahong Han, Jianguang Zhang, Zhongwen Xu, Shuai J. Yu

**A Modular Framework for the Automatic Reconstruction of Shredded Documents**
Bazvan Ranae

**Learning When to Reject an Importance Sample**
Jeremy C. Weiss, Sriraam Natarajan, C. David Page
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<tr>
<th>Time</th>
<th>Grand Ballroom I</th>
<th>Grand Ballroom J</th>
<th>Evergreen Ballroom B</th>
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<td>9:00 – 10:00 AM</td>
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### COFFEE BREAK. 10:00 – 10:20 AM

**AAAI-13: Language Processing**

- **AAAI-13 Outstanding Paper, Honorable Mention:** Effective Bilingual Constraints for Semi-Supervised Learning of Named Entity Recognizers
  - Mengqiu Wang, Wanxiang Che, Christopher D. Manning

- Grounding Natural Language References to Unvisited and Hypothetical Locations
  - Tom Williams, Reijn Campsnel, Gordon Briggs, Paul Schermerhorn, Matthias Schentz

- **An Extended GEM Algorithm for Inducing Lambda SCFG**
  - Peng Li, Yang Liu, Maosong Sun

- **Automatic Identification of Conceptual Metaphors with Limited Knowledge**
  - Lisa Gandy, Surej Alla, Mark Andalab, Ophir Frieder, Newton Howard, Sergey Konarenko, Morhi Koppell, Mark Last, Yair Neuman, Shlomo Argamon

**AAAI-13 (AI and the Web): Analyzing Networks and Graphs**

- **Fast and Exact Top-k Algorithms for PageRank**
  - Yasunari Fujita, Makoto Nakatsuji, Hiroaki Shikawa, Takeshi Mizuguta, Makoto Onizuka

- **Heterogeneous Metric Learning with Joint Graph Regularization for Cross-Media Retrieval**
  - Xiaohua Zhai, Xyoxin Peng, Janguo Xiao

- **TONIC: Target Oriented Network Intelligence Collection for the Social Web**
  - Roni Stern, Liron Samama, Rami Puzis, Tal Beja, Zalq Benaya, Ariel Felner

- **Preventing Unraveling in Social Networks Gets Harder**
  - Rajesh Chitnis, Fedor V. Fomin, Petr A. Golovach

**AAAI-13 (Robotics): Robot Motion Planning**

- **Robot Motion Planning with Dynamics as Hybrid Search**
  - Erion Plaku

- **GSMDPs for Multi-Robot Sequential Decision-Making**
  - Joao V. Mezias, Matthias T. J. Spaan, Pedro U. Lima

- **A Simple, but NP-Hard, Motion Planning Problem**
  - Lawrence H. Erickson, Steven M. LaValle

- **Structure and Intractability of Optimal Multi-Robot Path Planning on Graphs**
  - Jingjin Yu, Steven M. LaValle

**AAAI-13 Classic and Senior Member Papers (SMP)**

- **Classic Paper Award:** A Filtering Algorithm for Constraints of Difference in CSPs
  - Jean-Charles Regin

- **Classic Paper Award:** Acting Optimally in Partially Observable Stochastic Domains
  - Anthony Cassandra

- **Decision Making in Open Mixed Networks**
  - Kobi Gal (SMP)

**AAAI-13: Spotlights and Senior Members (SMP)**

- **RSS: What’s Hot**
  - Luke Zettlemoyer

- **CP: What’s Hot and Challenges**
  - Pascal Van Hentenryck

- **CP: Challenges**
  - Barry O’Sullivan

**AAAI-13: Structure Analysis**

- **Deployed:** USI Answers: Natural Language Question Answering Over (Semi-)Structured Industry Data
  - Ulli Wallinger, Dan Tecuci, Mihaela Otecanu, Vlad Macanu, Sean Sullivan

- **Emerging:** Clustering Hand-Drawn Sketches via Analogical Generalization
  - Maria D. Chang, Kenneth D. Forbus

**Late-Breaking Papers**

- **Modular Answer Set Solving**
  - Yuliya Lierler, Mirek Truszczynski

- **Additive Counterexample-guided Cartesian Abstraction Refinement**
  - Jonath Kepp, Malle Helmer

- **Partial Domain Search Tree for Constraint-Satisfaction Problems**
  - Gunther Shum, Ariel Felner, Roni Stern, Nathan Sturtevant

- **Volatil Multi-Armed Bandits for Guaranteed Targeted Social Crawler**
  - Zalq Benaya, Ramit Puzis, Roni Stern, Ariel Felner

- **Localizing Web Videos from Heterogeneous Images**
  - Xian-Ming Liu, Yue Gao, Rongrong Ji, Shiyu Chang, Thomas Huang

**LUNCH BREAK, 12:30 – 1:45 PM**
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)

GRAND BALLROOM A

2:45 – 3:45 PM

AAAI-13: Constraints
Unified Constraint Propagation on Multi-View Data
Zhinna Lu, Yuxin Peng
On the Subexponential Time Complexity of CSP
Iyad Kanj, Stefan Szeider
Improving the Performance of Consistency Algorithms by Localizing and Bolstering Propagation in a Tree Decomposition
Shant Karakashian, Robert J. Woodward, Berthe Y Choueiry
Extending STR to a Higher-Order Consistency
Christophe Lecoutre, Anastasia Paparrizou, Kostas Seregin

AAAI-13: Tensors and Manifolds
Multiscale Manifold Learning
Chang Wang, Sridhar Mahadevan
A Tensor-Variate Gaussian Process for Classification of Multidimensional Structured Data
Qibin Zhao, Lujing Zhang, Andrezej Cichocki
A Cyclic Weighted Median Method for $L_1$ Low-Rank Matrix Factorization with Missing Entries
Deyu Meng, Zongben Xu, Lei Zhang, Ji Zhao
Supervised Nonnegative Tensor Factorization with Maximum-Margin Constraint
Fei Wu, Xu Tan, Yi Yang, Ducheng Tao, Siyang Tang, Yueting Zhuang

4:45– 5:45 PM

TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM

Evergreen Ballroom and Foyer

Michael Littman and Marie desJardins

AAAI-13: Planning Under Uncertainty
Assumption-Based Planning: Generating Plans and Explanations under Incomplete Knowledge
Sanneh Davo-Mendelow, Jorge A. Baier, Shelia A. Mcilraith
A Fast Pairwise Heuristic for Planning under Uncertainty
Kousha Khavvats, Alan Mackworth
Mixed Observability Predictive State Representations
Syhric C. W. Ong, Yuri Grinberg, Joelle Pineau
Qualitative Planning under Partial Observability in Multi-Agent Domains
Ronan L. Buijman, Gao Shani, Shlomo Zilberstein

AAAI-13: Equilibrium and Negotiation
An Agent Design for Repeated Negotiation and Information Revelation with People
Noam Peled, Yuval (Kobi) Gal, Sari Kraus
Interdependent Multi-Issue Negotiation for Energy Exchange in Remote Communities
Muadilser Alam, Alex Rogers, Sarvupali D. Banerjee
Algorithms for Strong Nash Equilibrium with More than Two Agents
Nicola Gatti, Marco Rocco, Tuomas Sandholm
Equilibria of Online Scheduling Algorithms
Itai Arfango, Brendan Lauer, Miothe Tenenholz

7:00 – 10:00 PM

AAAI-13 BANQUET
Bellevue Arts Museum
7:00 pm – 10:00 pm
(reservation required)
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<td>1:45 – 2:45 PM</td>
<td>GRAND BALLROOM I</td>
<td>AAAI-13: (AI and the Web): Recommendation Systems</td>
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<td>Understanding and Predicting Interestingness of Videos</td>
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<td>Yu-Gang Jiang, Yanran Wang, Rui Feng, Xiangyung Xue, Yingxin Zheng, Hanfeng Yang</td>
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<td>Active Transfer Learning for Cross-System Recommendation</td>
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<td>Lili Zhao, Siyuan Jialin Pan, Evan Wei Xiang, Erheng Zhong, Zhongyi Liu, Qiang Yang</td>
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<td>LA-CTR: A Limited Attention Collaborative Topic Regression for Social Media</td>
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<td>Jeon-Hyung Kang, Kristina Lerman</td>
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<td>A Fast Bandit Algorithm for Recommendations to Users with Heterogeneous Tastes</td>
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<td>Pushmeet Kohli, Mahyar Salek, Greg Stoddard</td>
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<td>EVERGREEN BALLROOM B</td>
<td>AAAI-13: (Robotics): Human-Robot Collaboration</td>
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<td>Learning Collaborative Impedance-Based Robot Behaviors</td>
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<td>Leonel Roso, Sylvain Calinon, Darwin Caldwell, Pablo Jiménez, Carme Torras</td>
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<td>Inferring Robot Task Plans from Human Team Meetings: A Generative Modeling Approach with Logic</td>
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<td>Bern Kim, Caleb Chuanga, Julie Shah</td>
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<td>Data-Efficient Generalization of Robot Skills with Contextual Policy Search</td>
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<td>Andreas Gabor Kapcsics, Marc Peter Diezencroth, Jan Peters, Gerhard Neumann</td>
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<td>GRAND BALLROOM J</td>
<td>AAAI-13: Spotlights and Senior Members (SMP)</td>
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<td>ICWSM: What’s Hot; Structure and Dynamics of Social Networks and Information Networks</td>
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<td>ICWSM: Challenges</td>
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<td>AAMAS: Best Paper</td>
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<td>ISWC: Best Paper</td>
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<td>Discovering Concept Coverings in Ontologies of Linked Data Sources</td>
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<td>AAAI-13: Event Detection</td>
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<td>Emerging: Leveraging Crowdsourcing to Detect Improper Tasks in Crowdsourcing Marketplaces</td>
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<td>Yukino Saha, Hisashi Kashima, Kei Koshimoto, Gouhi Yamaguchi, Tetsuo Akiyoshi</td>
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<td>Emerging: Detection and Prediction of Adverse and Anomalous Events in Medical Robots</td>
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<td>Kai Liang, Feng Cao, Zhaofu Bai, Mark Rew Late, M. Cenk Cervigna, Andy Podgurski, Saumya Ray</td>
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<td>Emergent: Detecting the Moment of Snap in Real-World Football Videos</td>
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<td>Behroz Mahassian, Sheng Chen, Alan Fern, Sonia Tudorovic</td>
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<td>Emerging: Integrating Digital Pens in Breast Imaging for Instant Knowledge Acquisition</td>
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<td>Mark Buller, Eric Sodomka, William Tharion, Cynthia Clements, Reed Hoyt, Odest Chadwickjenkins</td>
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<td>Emerging: Physical Activity Recognition from Accelerometer Data Using a Multi-Scale Ensemble Method</td>
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<td>Yongze Zheng, Weng-Kam Wong, Xueze Guan, Stewart Trost</td>
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**Conference Schedule—Wednesday Afternoon, July 17**
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**COFFEE BREAK, 10:00 – 10:20 AM**

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<td>Boyang Li, Stephen Lee-Urban, George Johnston, Mark Beal</td>
<td>Goodworth</td>
<td>Relieff Mer, Edith Elkind, Jeffrey S. Rosenschein</td>
<td>Berk Ustun, Stefano Tracca, Cynthia Rudin</td>
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<tr>
<td>A Topic-Based Coherence Model for Statistical Machine Translation Deyi Xiong, Min Zhang</td>
<td>Improving WalkSAT for Random k-Satisfiability Problem with ( k &gt; 3 ) Shaowei Gai, Kede Su, Chuan Luo</td>
<td>Bounding the Cost of Stability in Games over Interaction Networks Relieff Mer, Yair Zick, Edith Elkind, Jeffrey S. Rosenschein</td>
<td>Predicting Power Failures with Reactive Point Processes Srikant Errykin, Cynthia Rudin, Tyler H. McCormick</td>
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<td>Analyzing the Effectiveness of Adversary Modeling in Security Games Thanh H. Nguyen, Rong Yang, Amos Azaria, Sarit Kraus, Milind Tambe</td>
<td>An Interpretable Stroke Prediction Model Using Rules and Bayesian Analysis Benjamin Letham, Cynthia Rudin, Tyler H. McCormick, David Madigan</td>
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<td>Nathaniel Gemelli, Jeffrey Hudeck, Jas C. Oh</td>
<td>Sensitivity of Diffusion Dynamics to Network Uncertainty</td>
<td>Berk Ustun, Stefano Tracca, Cynthia Rudin</td>
<td>Berk Ustun, Stefano Tracca, Cynthia Rudin</td>
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<td>Identifying Important Nodes in Heterogeneous Networks Oliver Schulte, Fatemeh Riahi, Qiang Li</td>
<td>Convex Subspace Representation Learning from Multi-View Data</td>
<td>Detecting Patterns of Crime with Series Finder</td>
<td>Detecting Patterns of Crime with Series Finder</td>
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<td>Movie Recommender System for Profit Maximization Amin Azaria, Ayvatan Haasidim, Sarit Kraus, Adi Eshkol, Ofir Weintraub, Irit Netanely</td>
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<td>Predicting Power Failures with Reactive Point Processes</td>
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**LUNCH BREAK, 12:30 – 1:45 PM**

**IIAAI-13: Outstanding Paper Award: SMILe: Shuffled Multiple Instance Learning**  
Gary Doran, Soumya Ray
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### COFFEE BREAK, 10:00 – 10:20 AM
- AAAI-13: Temporal Reasoning
  - Timelines with Temporal Uncertainty
  - Decoupling the Multiagent Disjunctive Temporal Problem
  - Temporal Milestones in HTNs
  - Simple Temporal Problems with Taboo Regions
- AAAI-13: (AI and the Web): Ontologies and Reasoning
  - Introducing Nominals to the Combined Query Answering Approaches for EL
  - Not Quite the Same: Identity Constraints for the Web of Linked Data
- AAAI-13: (Computationally Sustainable AI): MDPs and Sequential Processes
  - Agent Cooperatives for Effective Power Consumption Shifting
  - PAC Optimal Planning for Invasive Species Management: Improved Exploration for Reinforcement Learning from Simulator-Defined MDPs
  - Online Optimization with Dynamic Temporal Uncertainty: Incorporating Short Term Predictions for Renewable Integration in Intelligent Energy Systems
- AAAI-13: (AI and the Web): Ontologies and Reasoning
  - CSAIL Award: A Temporal Motif Mining Approach to Unsupervised Energy Disaggregation
  - Multiple Hypothesis Object Tracking For Unsupervised Self-Learning
  - Adaptive Spatio-Temporal Exploratory Models: Hemispheri-Wide Species Distributions
  - CSAIL Award: Approximate Bayesian Inference for Reconstructing Velocities of Migrating Birds from Weather Radar

### AAAI-13: Spotlights and Senior Members (SMP)
- ICAPS: Best Paper
  - Ronald Petrick
  - ICAPS: What’s Hot
  - Malte Helmert
- ECML/PKDD: What’s Hot
  - Kristian Kersting
- ICML: What’s Hot
  - Michael Littman
- NIPS: What’s Hot
  - Rob Fergus
- IJCAI-13: Pattern Analysis and Modeling
  - Emerging: Interactive Information Extraction and Navigation to Enable Effective Link Analysis and Visualization of Unstructured Text
  - Challenge: Scalable Models for Patterns of Life
    - Jeremiah Solorio-Kovarik, Sas Schatz, Randolph M. Jones, Kathleen Bartlett, Robert E. Wray

### LUNCH BREAK, 12:30 – 1:45 PM
- AAAI-13: Late-Breaking Papers
  - Climate Prediction via Matrix Completion
  - Using Machine Learning to Improve Stochastic Optimization
  - Label Ranking by Directly Optimizing Performance Measures
  - Utilizing Landmarks in Euclidean Heuristics for Optimal Planning
  - Challenge: Scalable Models for Patterns of Life
  - IJCAI-13: Pattern Analysis and Modeling
    - Emerging: Interactive Information Extraction and Navigation to Enable Effective Link Analysis and Visualization of Unstructured Text
    - Challenge: Scalable Models for Patterns of Life
      - Jeremiah Solorio-Kovarik, Sas Schatz, Randolph M. Jones, Kathleen Bartlett, Robert E. Wray

### EVERGREEN BALLROOM B
- AAAI-13: Spotlights and Senior Members (SMP)
  - Meeting the Responsibility to Explain AI
    - Bruce Buchanan and Reid Smith (SMP)
  - ICAPS: Best Paper
    - Ronald Petrick
  - ICAPS: What’s Hot
    - Malte Helmert
- ICML: What’s Hot
  - Michael Littman
- NIPS: What’s Hot
  - Rob Fergus
- IJCAI-13: Pattern Analysis and Modeling
  - Emerging: Interactive Information Extraction and Navigation to Enable Effective Link Analysis and Visualization of Unstructured Text
  - Challenge: Scalable Models for Patterns of Life
    - Jeremiah Solorio-Kovarik, Sas Schatz, Randolph M. Jones, Kathleen Bartlett, Robert E. Wray
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<td><strong>AAAI-13: Vision</strong></td>
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<td>Supervised and Projected Sparse Coding for Image Classification</td>
<td>Jin Huang, Feiping Nie, Heng Huang, Chris Ding</td>
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<td>Joint Object and Pose Recognition Using Homeomorphic Manifold Analysis</td>
<td>Haosong Zhang, Yerek El-Gaaly, Ahmed Elgammal, Zhiguo Jiang</td>
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<td>Vector-Valued Multi-View Semi-Supervised Learning for Multi-Label Image Classification</td>
<td>Yong Lu, Daosheng Tao, Chang Xu, Dongchen Li, Chao Xu</td>
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<td><strong>AAAI-13: Bayesian Inference</strong></td>
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<td>GtSS: Combining Gibbs Sampling and SampleSearch for Inference in Mixed Probabilistic and Deterministic Graphical Models</td>
<td>Deepak Venugopal, Vibhav Gogate</td>
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<td>Complexity of Inferences in Polytree-Shaped Semi-Qualitative Probabilistic Networks</td>
<td>Casus P. de Campos, Fabio G. Cozman</td>
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<td>Joint Extraction and Labeling via Graph Propagation for Dictionary Construction</td>
<td>Do Soo Kim, Randal Verma, Peter Z. Teh</td>
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<td><strong>AAAI-13: Classification</strong></td>
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<td>Uncorrelated Lasso</td>
<td>Si-Bao Chen, Chris Ding, Bin Luo, Ying Xie</td>
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<td>Large-Scale Hierarchical Classification via Stochastic Perceptron</td>
<td>Dehua Liu, Bojun Tu, Hai Quan, Zhohua Zhang</td>
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<td>Teaching Classification Boundaries to Humans</td>
<td>Sumit Basu, Janara Christensen</td>
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<td>A Maximum K-Min Approach for Classification</td>
<td>Mingzhi Dong, Liang Yin, Weihong Dong, Li Shang, Jun Gao, Honggang Zhang</td>
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<td><strong>AAAI-13: Game Playing / Plan Reuse</strong></td>
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<td>Optimizing Objective Function Parameters for Strength in Computer Game-Playing</td>
<td>Yuhikano Sato, Makoto Miwa, Shogo Takeuchi, Daikan Takeuchi</td>
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<td>Filtering with Logic Programs and Its Application to General Game Playing</td>
<td>Michael Thielscher</td>
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<td>Parameterized Complexity Results for Plan Reuse</td>
<td>Ronald de Haan, Anna Rutikova, Stefan Seidler</td>
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<td>Model-Lite Case-Based Planning</td>
<td>Hanxue Hanbei Zhao, Tuan Nguyen, Subbarao Kambhampati</td>
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<td><strong>AAAI-13: Sample Complexity / Anomaly Detection</strong></td>
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<td>Towards Cohesive Anomalies Mining</td>
<td>Yan Xiong, Yangyang Zhu, Philip S. Yu, Yuan Pei</td>
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<td>A Generalized Student-t Based Approach to Mixed-Type Anomaly Detection</td>
<td>Yen Cheng Liu, Feng Chen, Yang Chen, Chang-Tien Lu</td>
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<td>Sample Complexity and Performance Bounds for Non-Parametric Approximate Linear Programming</td>
<td>Jason Pazis, Ronald Parr</td>
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<tr>
<td>AAAI-13 Outstanding Paper, Honorable Mention: PAC Optimal Exploration in Continuous Space Markov Decision Processes</td>
<td>Jason Pazis, Ronald Parr</td>
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**TECHNICAL / LATE BREAKING PAPERS POSTER SESSION, COFFEE BREAK, 3:45 – 4:45 PM**

Evergreen Ballroom and Foyer
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<th>GRAND BALLROOM J</th>
<th>EVERGREEN BALLROOM B</th>
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<tr>
<td>Learning Integrated Symbolic and Continuous Action Models for Continuous Domains&lt;br&gt;Joseph Z. Xu, John E. Laird</td>
<td>Negotiated Learning for Smart Grid Agents: Entity Selection Based on Dynamic Partially Observable Features&lt;br&gt;Prashant P. Reddy, Manuela M. Veloso</td>
<td><strong>Emerging: Case-Based Meta-Prediction for Bioinformatics</strong>&lt;br&gt;Xi Yun, Susan L. Epstein, Weiwei Han, Lei Xie</td>
<td><strong>AAAI-13: Spotlights and Senior Members (SMP)</strong>&lt;br&gt;How Can AI Help Synthetic Biology?&lt;br&gt;Fusun Yaman, Aaron Adler, Jacob Beal (SMP)</td>
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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. Vinyaswaran
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

Benjamin Grosof, 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
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 papers 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.
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

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**Exhibitors**

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

AI Topics
aaai.org/aitopics

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### 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 options 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 orconcierge 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 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.

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In offering the Hyatt Bellevue Regency Hotel, GES Inc., Seattle Tacoma International Airport, and all other service providers (hereinafter referred to as “Supplier(s)” for the AAAI Conference on Artificial Intelligence and the Innovative Applications Conference), AAAI acts only in the capacity of agent for the Suppliers that are the providers of the service. Because AAAI has no control over the personnel, equipment or operations of providers of accommodations or other services included as part of the AAAI-13/IAAI-13 program, AAAI assumes no responsibility for and will not be liable for any personal delay, inconveniences or other damage suffered by conference participants which may arise by reason of (1) any wrongful or negligent acts or omissions on the part of any Supplier or its employees, (2) any defect in or failure of any vehicle, equipment or instrumentality owned, operated or otherwise used by any Supplier, or (3) any wrongful or negligent acts or omissions on the part of any other party not under the control, direct or otherwise, of AAAI.
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.
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
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.