Thirtieth AAAI Conference
on Artificial Intelligence

Twenty-Eighth Conference on
Innovative Applications
of Artificial Intelligence

The Sixth Symposium on
Educational Advances in AI

AAAI-16 / IAAI-16 / EAAI-16 Program

February 12–17, 2016
Phoenix Convention Center / Hyatt Regency Phoenix
Phoenix, Arizona, USA

Sponsored by the
Association for the Advancement of Artificial Intelligence

Morning	Afternoon	Evening (after 5:00 pm)
Friday, February 12		
Tutorial Forum Workshops AAAI/SIGAI DC	Tutorial Forum Workshops AAAI/SIGAI DC	Student Welcome Reception
Saturday, February 13		
Tutorial Forum Workshops AAAI/SIGAI DC EAAI Open House Invited Talks Robotics Exhibits	Tutorial Forum Workshops AAAI/SIGAI DC EAAI Open House Robotics Exhibits	Speed Dating Opening Reception
Sunday, February 14		
AAAI / IAAI Welcome / AAAI Awards Presidential Address: Dietterich AAAI / IAAI Technical Program Classic Paper/Robotics Talks EAAI Robotics/Vendor Exhibits Video Competition Viewing	Lunch with a Fellow IAAI Invited Talk: Rao AAAI / IAAI Technical Program What's Hot Talks / Robotics Talks EAAI Robotics/Vendor Exhibits Video Competition Viewing	AAAI Invited Talk: Krause AI Job Fair Poster / Demo Session 1 Fellows Dinner
Monday, February 15		
Women's Mentoring Breakfast AAAI Invited Talk: Murphy AAAI / IAAI Technical Program Senior Member Blue Sky Talks Student Abstract Spotlights Robotics/Vendor Exhibits Video Competition Viewing	AAAI Invited Talk: Bostrom AAAI / IAAI Technical Program Robotics Talks Lunch with a Fellow Robotics/Vendor Exhibits Video Competition Awards	AI Labor Panel Engelmore Award Lecture: Smith Poster / Demo Session 2 Game Night Video Competition Viewing
Tuesday, February 16		
AAAI Conference Awards / Allen AI Science Challenge Award AAAI Invited Talk: Hassabis What's Hot Talks Video Competition Viewing Robotics / Vendor Exhibits	Lunch with a Fellow AAAI / IAAI Technical Program Senior Member / What's Hot Talks Video Competition Viewing Robotics / Vendor Exhibits	AAAI Community Meeting Autonomous Flight Panel Poster / Demo Session 3
Wednesday, February 17		
Invited Talk: Tomlin AAAI Technical Program What's Hot Talks		

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Awards

AAAI Special Awards and honors will be presented Sunday, February 14, 8:30–8:55 AM, in West 301A on the 3rd Level of the Phoenix Convention Center. AAAI-16 Awards and the Allen AI Science Challenge Awards will be presented on Tuesday, February 16, 8:30–8:50 AM in the same location.

AAAI Special Awards and Honors

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

2016 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 six newly elected Fellows for 2016, who will be honored during the annual Fellows dinner on Sunday, February 14:

Giuseppe De Giacomo (University of Rome La Sapienza, Italy)
Daniel D. Lee (University of Pennsylvania, USA)
Bing Liu (University of Illinois at Chicago (UIC), USA)
Maja J. Mataric (University of Southern California, USA)
Eric Poe Xing (Carnegie Mellon University, USA)
Zhi-Hua Zhou (Nanjing University, China)

Senior Member Recognition

AAAI is pleased to announce the newly elected 2016 AAAI senior member, who is being recognized for his long-term participation in AAAI and his distinction in the field of artificial intelligence.

Wheeler Ruml (University of New Hampshire, USA)

Classic Paper Awards

The 2016 AAAI Classic Paper awards honor the authors of the following two paper(s) deemed most influential from the Fifteenth National Conference on Artificial Intelligence, held in 1998 in Madison, Wisconsin, USA.

2016 AAAI Classic Paper Awards

The Interactive Museum Tour-Guide Robot
Wolfram Burgard, Armin B. Cremers, Dieter Fox, Dirk Hähnel, Gerhard Lakemeyer, Dirk Schulz, Walter Steiner, and Sebastian Thrun
For significant contributions to probabilistic robot navigation and the integration with high-level planning methods.

Boosting Combinatorial Search through Randomization
Carla P. Gomes, Bart Selman, and Henry Kautz
For significant contributions to the area of automated reasoning and constraint solving through the introduction of randomization and restarts into complete solvers.

The Classic Paper Award Talks will be held Sunday, February 14 at 11:30 AM in West 101A on the first level of the Phoenix Convention Center.

2016 Distinguished Service Award

The AAAI Distinguished Service Award recognizes one individual each year for extraordinary service to the AI community. The 2016 recipient is Maria Gini, University of Minnesota, who is being recognized for her outstanding contributions to the field of artificial intelligence through sustained service leading AI societies, journals, and conferences; mentoring colleagues; and working to increase participation of women in AI and computing.

New! 2016 AAAI/EAAI Outstanding Educator Award

The AAAI/EAAI Outstanding Educator Award was established to recognize a person (or group of people) who has (have) made major contributions to AI education that provide long-lasting benefits to the AI community. The inaugural 2016 award is being presented to the team of Peter Norvig and Stuart Russell, for their definitive text, "Artificial Intelligence: A Modern Approach," that systemized the field of artificial intelligence and inspired a new generation of scientists and engineers throughout the world, as well as for their individual contributions to education in artificial intelligence. This award is jointly sponsored by AAAI and the Symposium on Educational Advances in Artificial Intelligence.

Robert S. Engelmore Memorial Award and Lecture

The Robert S. Engelmore Award is sponsored by IAAI-16 and *AI Magazine,* and will be presented by Peter Yeh and James Crawford, IAAI-16 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 2016 award will be presented to Reid G. Smith (i2k Connect) for pioneering research contributions and high-impact applications in knowledge management and for extensive contributions to AAAI, including educating and inspiring the broader community about AI through AITopics. The lecture will be held on Monday, February 15, 5:10 PM, in West 101ABC on the first level of the Phoenix Convention Center. (See lecture description on page 9.)

IAAI-16 Deployed Applications Awards

The three IAAI-16 Deployed Application Awards will be announced during the Opening Ceremony on Sunday, February 14 by IAAI-16 Chair Peter Yeh and Cochair James Crawford. Certificates will be presented during paper sessions.

Deploying PAWS: Field Optimization of the Protection Assistant for Wildlife Security
Fei Fang, Thanh H. Nguyen, Rob Pickles, Wai Y. Lam, Gopalasamy R. Clements, Bo An, Amandeep Singh, Milind Tambe, Andrew Lemieux

Ontology Re-Engineering: A Case Study from the Automotive Industry
Nestor Rychtyckyj, Baskaran Sankaranarayanan, P Sreenivasa Kumar, Deepak Khemani, Venkatesh Raman

Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media
Adam Sadilek, Henry Kautz, Lauren DiPrete, Brian Labus, Eric Portman, Jack Teitel, Vincent Silenzio

AAAI-16 Awards

The AAAI-16 Awards will be presented by Program Cochairs Michael Wellman and Dale Schuurmans.

AAAI-16 Outstanding Paper Award

This year, AAAI's Conference on Artificial Intelligence honors the following two papers, which exemplify high standards in technical contribution and exposition by regular and student authors.

AAAI-16 Outstanding Paper Award

Bidirectional Search That Is Guaranteed to Meet in the Middle
Robert C. Holte, Ariel Felner, Guni Sharon, Nathan R. Sturtevant

AAAI-16 Outstanding Student Paper Award

Toward a Taxonomy and Computational Models of Abnormalities in Images
Babak Saleh, Ahmed Elgammal, Jacob Feldman, Ali Farhadi

AAAI-16 Blue Sky Idea Awards

AAAI, in cooperation with the Computing Research Association Computing Community Consortium (CCC), is pleased to present three Blue Sky Awards for papers that present ideas and visions that can stimulate the research community to pursue new directions, such as new problems, new application

domains, or new methodologies. The recipients of the Blue Sky Idea travel awards, sponsored by the CCC, are as follows.

Indefinite Scalability for Living Computation
David H. Ackley

Embedding Ethical Principles in Collective Decision Support Systems
Joshua Greene, Francesca Rossi, John Tasioulas, Kristen Brent Venable, Brian Williams

Five Dimensions of Reasoning in the Wild
Don Perlis

Student Activities

In cooperation with and with support from AI Journal, AAAI launched a focused effort in 2015 to increase student participation at AAAI. The 2016 conference committee has organized a series of student activities at AAAI-16. We invite you to participate for an enriched AAAI experience!

(For complete information about Student Programs at AAAI-16, please see movingai.com/AAAI16)

Student Welcome Reception

Sponsored by USC/Information Sciences Institute
Friday, February 12, Phoenix Convention Center

All students are welcome at the AAAI-16 Student Welcome Reception. Light refreshments will be served. The evening will begin with a joint event with the Doctoral Consortium and continue with a short program afterwards.

5:00–6:00 PM: Career Panel (Doctoral Consortium), 211B, 2nd level

6:00–6:30 PM: Student Icebreaker Activity (Atrium Lobby, 1st level)

6:30–7:30 PM: Welcome from organizers and AAAI, followed by reception (West Arcade, 1st Level)

Dining/Group Meals

A student coordinator will be organizing informal opportunities for students to eat together for lunches and dinners at various casual restaurants near the conference venue. Students will be expected to pay for their own meals. Some groups will be available based on research or career interests, while others will be general groups. Meet in the registration area.

AAAI/SIGAI Doctoral Consortium

Friday and Saturday, February 12–13
211B, 2nd Level

The Twenty-First AAAI/SIGAI 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 seventeen students accepted to participate in this program will also participate in the AAAI-16 evening Poster / Demo Session 1 on Sunday, February 14.

All interested AAAI-16 student registrants are invited to observe the presentations and participate in discussions at the workshop.

AAAI and SIGAI gratefully acknowledge the generous grants from AI Journal, the National Science Foundation and David E. Smith, which make this program possible. The schedule is available at ciigar.csc.ncsu.edu/aaai2016-dc.

AAAI-16 Social and Special Events

AAAI Opening Reception

Saturday, February 13, 6:00 PM–7:30 PM, Hyatt Regency Phoenix Hotel, Regency Ballroom

The AAAI-16 Opening Reception will be held in the Regency Ballroom of the Hyatt Regency Phoenix Hotel. A variety of heavy hors d'oeuvres and one complimentary beverage will be served. A no-host bar will also be available. Admittance to the reception is included in the AAAI-16 technical registration. A $55.00 per person fee ($20.00 for children over the age of 12) will be charged for guests and other nontechnical conference registrants.

AAAI-16 Poster / Demo Sessions

Sunday, February 14, 6:30–8:30 PM   Monday, February 15, 6:30–8:30 PM
Tuesday, February 16, 6:30–8:30 PM   West 301C, Third Level

Each AAAI-16 poster / demo session will include posters by authors who presented poster ads that day (please see schedule for detail). In addition, a total of 29 technical demos will be divided among the three evening sessions. Sunday evening will also include Doctoral Consortium and EAAI posters. Monday evening will include posters by student abstract authors. For a listing of posters and exhibits, please see the technical schedule and detailed information elsewhere in this guide. Attendees should also refer to the separate insert in their registration materials for an overview of the technical poster presentations. Additional detail is also available in the online schedule via Guidebook.

Poster / Demo sessions will include light suppers and one drink ticket to use on any one of the three poster session evenings. A no-host bar will also be available. Admittance to the reception is included in the AAAI-16 registration. A $40.00 per person fee ($15.00 for children over the age of 12) will be charged for guests and other nontechnical conference registrants per night. AAAI gratefully acknowledges IBM Research's sponsorship of the Tuesday evening session.

AAAI Research Speed-Dating

Saturday, February 13, 5:30 PM–6:30 PM, West 301C, Third Level

Meet AAAI attendees from senior researchers to student newcomers! It's sure to be a great opportunity to network, and to receive or give mentoring and career advice. Doors open at 5:30 PM sharp. There will be no admittance after 5:40 PM, and admittance is on a first-come basis.

AAAI Game Night

Monday, February 15, 8:00–10:00 pm, 106, First Level

Come spend an evening playing games with other AAAI participants at the fourth annual AAAI Games Night. There will be organized AI-themed games. Bring your own games to play afterwards. AAAI gratefully acknowledges Lionbridge's sponsorship of this event.
For additional social events specifically designed for students, please see pages 5–6.

AI Video Competition

Video Loop: Sunday–Tuesday, February 14–16, West 301 Foyer
Awards Ceremony: Monday, February 15, 6:00–6:30 PM, West 301A

The Tenth AI Video Competition (http://aivideocompetition.org/aaai-video-competition-2016/) communicates to the world the fun of pursuing research in AI, and illustrates 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 Sabine Hauert (University of Bristol, UK) and Charles Isbell (Georgia Tech). Awards will be presented in the following categories: Best Video, Best Student Video, and People's Choice. 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. AAAI gratefully acknowledges the Bristol Robotics Laboratory for help with the manufacturing of the awards.

AAAI-16 Open House

Saturday, February 13, 9:00 AM–4:00 PM
106C and Arcade Area, 1st Level

The AAAI-16 Open House will welcome high-school students in the Phoenix area, the general public, graduate and undergraduate students, and established AI researchers.

The day will comprise a variety of invited talks, posters and the robotics exhibition. The latest work in many areas of AI will be showcased, so be sure to arrive in time to participate. Admission is open to all!

AAAI-16 Open House Invited Talks

Large-Scale Predictive Analytics: Perspectives from Structuralism
Jun (Luke) Huan (University of Kansas)
Predictive analytics aims to extract information from existing data sets and combine the information with previous experience in order to predict future outcomes and trends. Large-scale predictive analytics is a

corner stone of Big Data analytics and plays an essential role in enabling actions based on large-scale data. At the first half of the talk, Dr. Huan plans to cover a set of selected topics in large-scale predictive analytics, including but not limited to multi-task learning, multi-view learning, sparse learning, and multi-label learning. At the second half the talk, Dr. Huan will talk about the related funding opportunities at NSF CISE/IIS division for faculty members, graduate students, and undergraduate students.

Symbols-Neurons, Logic-Probability, Replace-Augment, Disappointment-Doomsday: Where Will the AI Pendulum Swing Next?

Subbarao Kambhampati (Arizona State University)

Since its inception, the field of a AI has seen a fascinating series of pendulum swings both in its internal research methodology and in its external public perception. I will examine some of these prominent swings to-date, and consider where the pendulum might swing next.

AAAI-16 Open House Posters

Dissemination in Networks
Hanghang Tong, Chen Chen

Collaboration in Big Networks
Liangyue Li, Hanghang Tong

The Child is Father of the Man: Foresee the Success at the Early Stage
Liangyue Li, Hanghang Tong

Learning Complex Rare Categories with Dual Heterogeneity
Pei Yang, Jingrui He, Jia-Yu Pan

Heterogeneous Machine Learning
Jingrui He, Pei Yang

Association between A1C Improvement and Sentiment in Diabetes Forum Posts
Pei Yang, Angela Pinto, Jieping Ye, Theodoros Lappas, Jingrui He

MUVIR: Multi-View Rare Category Detection
Dawei Zhou, Jingrui He, K. Selcuk Candan, Hasan Davulcu

User Guided Cross-Domain Sentiment Classification
Arun Reddy Nelakurthi, Angela Pinto, Curtiss Cook, Jieping Ye, Theodoros Lappas, Jingrui He

Student-Accessible Tutorials

Friday-Saturday, February 12–13

AAAI will feature a number of tutorials that are very well suited for students who are new to a PhD program or new to AI research in general. The presenters of the following tutorials are putting particular work into making their tutorials accessible to students with limited backgrounds in AI. Please see page 7 for locations and times.

SA4: How to Automatically Machine Read the Web
SP1: Algorithm Configuration: A Hands on Tutorial
FA1: CP-Nets
FP4: Deep Learning: From Foundations to Implementation

AAAI-16 Research Speed Dating

Saturday, February 13, 5:30–6:30 PM
301C, 3rd Level

Want to get to know more researchers? You will get the opportunity to meet and chat with various AAAI attendees from senior researchers to student newcomers before going to the conference reception. Never feel bored and lonely at AAAI again!

AAAI Fellow / Student Lunches

Sunday–Tuesday, February 14–16
12:30–2:00 PM

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 on-site registration desk in the foyer of the West 301C Ballroom. Students should meet their designated Fellow in onsite registration on their assigned day.

AAAI/SIGAI AI Job Fair and Electronic Bulletin Board

Sunday, February 14, 6:10–7:10 PM
211 A/B, 2nd Level

The AAAI and ACM SIGAI AI Job Fair will provide an opportunity for a host of companies and institutions to highlight their current job opportunities. The short presentations will be followed by a meet-and-greet session. Over 25 employers will be participating. Light refreshments will be served. Be sure to stop here before heading to the evening poster and demo session.

AAAI-16 will also continue to host the electronic job bulletin board. Companies with job opportunities will provide ads to populate an ongoing kiosk display.

Breakfast with Champions: A Women's Mentoring Event

Monday, February 15, 7:45– 8:45 AM
Remington, 2nd Floor, Hyatt Regency Phoenix Hotel

AAAI is holding the second annual women's mentoring event for women students to meet with senior women in computer science and/or artificial intelligence. Pre-registration was required and admittance is by ticket only. Sponsored by AI Journal and Women in Machine Learning.

Student Abstract and Poster Program

Monday, February 15
Oral Presentations: 10:00–11:00 AM, 106B, 1st Level
Poster Presentations: 6:30–8:30 PM, 301C, 3rd Level

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. Students who have been selected as part of a group of 15 finalists to compete for the "Best Student 3-Minute Presentation" will present their work in 3-minute spotlight talks in parallel with other technical sessions. All students will present posters at the evening poster session. An award will also be presented for the "Best Student Poster."

AAAI-16 Games Night

Monday, February 15, 8:00–10:00 pm
106, 1st Level of the Convention Center

Come spend an evening playing games with other AAAI participants at the fourth annual AAAI Games Night. There will be organized AI-themed games. Bring your own games to play afterwards.

Tutorial Forum

AAAI-16 technical registrants may attend 4-5 consecutive tutorials. Tutorials are 4 hours unless noted otherwise. All tutorials are on the 1st Level of the Convention Center.

Friday, February 12
9:00 AM–1:00 PM

FA1: CP-Nets
Thomas E. Allen, Judy Goldsmith, and Francesca Rossi
Room 102A

FA2: Organ Exchanges: A Success Story of AI in Healthcare
John Dickerson and Tuomas Sandholm
Room 105C

FA3: Recent Directions in Heuristic-Search
Ariel Felner, Wheeler Ruml, and Nathan Sturtevant
Room 105A/B

FA4: Symbolic Methods for Hybrid Inference, Optimization, and Decision-Making
Scott Sanner
Room 101

Friday, February 12
2:00 PM–6:00 PM

FP1: AI for Disasters (2:00–3:45 PM)
Robin R. Murphy
Room 105C

FP2: Answer Set Programming Modulo Theories (4:15–6:00 PM)
Joohyung Lee
Room 105C

FP3: AI Planning and Scheduling for Real-World Applications
Steve Chien and Daniele Magazzeni
Room 105A/B

FP4: Deep Learning: From Foundations to Implementation
Reza Borhani, Jeremy Watt and Aggelos K. Katsaggelos
Room 101

FP5: Type-Based Methods for Interaction in Multiagent Systems
Stefano Albrecht and Prashant Doshi
Room 102A

Saturday, February 13
9:00 AM–1:00 PM

SA1: CogSketch
Kenneth D. Forbus, Maria D. Chang, and Matt McLure
Room 105B

SA2: Constraint (Logic) Programming
Roman Barták
Room 105A

SA3: Diffusion in Social Networks
Paulo Shakarian
Room 102A/B

SA4: How to Automatically Machine Read the Web
Estevam Rafael Hruschka Junior
Room 101

Saturday, February 13
2:00 PM–6:00 PM

SP1: Algorithm Configuration: A Hands on Tutorial
Frank Hutter and T. Marius Lindauer
Room 102A/B

SP2: Algorithms for Maximum Satisfiability with Applications to AI
Fahiem Bacchus and Matti Järvisalo
Room 105A

SP3: Computational Epidemiology and Public Health Policy Planning
Madhav Marathe, Naren Ramakrishnan and Anil Kumar Vullikanti
Room 105B

SP4: Learning and Inference in Structured Prediction Models
Kai-Wei Chang, Gourab Kundu, Dan Roth, and Vivek Srikumar
Room 101

Workshop Program

Registration for a workshop requires a supplemental fee for AAAI-16 technical registrants. Individuals who do not wish to participate in any other AAAI-16 programs or events may elect the workshop only registration fee. Electronic copies of technical report papers have been circulated to preregistrants. All workshops will be held in the Phoenix Convention Center, except W13, as noted.

Friday, February 12

W1: Artificial Intelligence Applied to Assistive Technologies and Smart Environments
9:00 AM–4:20 PM
Room 103A

W3: Artificial Intelligence for Cyber Security
9:00 AM–5:00 PM
Room 106B

W4: AI for Smart Grids and Smart Buildings
9:00 AM–5:00 PM
Room 104A

W5: Beyond NP
9:00 AM–5:00 PM
Room 104B

W9: Incentives and Trust in Electronic Communities
9:15 AM–5:30 PM
Room 103B

W11: Knowledge Extraction from Text
9:00 AM–5:00 PM
Room 106A

W16: World Wide Web and Population Health Intelligence
9:00 AM–5:25 PM
Room 212A

Saturday, February 13

W2: AI, Ethics, and Society
9:00 AM–5:00 PM
Room 106B

W6: Computer Poker and Imperfect Information Games
9:00 AM–6:00 PM
Room 106A

W7: Declarative Learning Based Programming
9:00 AM–5:00 PM
Room 103A

W8: Expanding the Boundaries of Health Informatics Using AI
9:00 AM–5:00 PM
Room 212A

W12: Multiagent Interaction without Prior Coordination
9:00 AM–5:00 PM
Room 104A

W13: Planning for Hybrid Systems
8:45 AM–5:30 PM
Russell B/C, Second level
Hyatt Regency Phoenix Hotel

W14: Scholarly Big Data: AI Perspectives, Challenges, and Ideas
9:00 AM–5:00 PM
Room 103B

W15: Symbiotic Cognitive Systems
9:00 AM–5:15 PM
Room 104B

AAAI-16 / IAAI-16 Invited and Senior Member Presentations, and What's Hot Talks

AAAI-16 and IAAI-16 Invited Talks and Panels will be held in the West 301A, except where noted, Sunday–Wednesday, February 14–17. Senior Member and What's Hot Talks will be held in West 106A.

Sunday, 8:30–8:55 AM

Welcome and Opening Remarks, AAAI Organizational Awards/Honors

Sunday, 9:00–9:50 AM

AAAI-16 Presidential Address

Thomas G. Dietterich (Oregon State University)
See description, page 9.

Sunday, 4:00 PM–6:00 PM

IAAI-16 Invited Talk:

Rethinking Computation: Substrates for Machine Intelligence

Naveen Rao (Nervana, Inc.)
Deep learning has had a major impact in the last 3 years. Imperfect interactions with machines, such as speech, natural language, or image processing have been made robust by deep learning and deep learning holds promise in finding usage structure in large datasets. However, the training process is lengthy and has proven to be difficult to scale due to constraints of existing compute architectures. Beyond the algorithms, deep learning is a fundamentally new way to express computation. In this talk, I will outline some of these challenges and how fundamental changes to the organization of computation and communication can lead to large advances in capabilities.

Sunday, 5:10 PM–6:10 PM

AAAI-16 Invited Talk:

From Proteins to Robots: Learning to Optimize with Confidence

Andreas Krause (ETH Zurich)
With the success of machine learning, we increasingly see learning algorithms make decisions in the real world. Often, however, this is in stark contrast to the classical train-test paradigm, since the learning algorithm affects the very data it must operate on. I will explain how statistical confidence bounds can guide data acquisition in a principled way to make effective decisions in a variety of complex settings. I will discuss several applications, ranging from autonomously designing wetlab experiments in protein structure optimization, to safe automatic parameter tuning on a robotic platform.

Monday, 8:50–9:50 AM

AAAI-16 Invited Talk:

Learning Treatment Policies in Mobile Health

Susan Murphy (University of Michigan)
I describe a sequence of steps that facilitate effective learning of treatment policies in mobile health. These include a clinical trial with associated sample size calculator and data analytic methods. An off-policy Actor-Critic algorithm is developed for learning a treatment policy from this clinical trial data. Open problems abound in this area, including the development of a variety of online predictors of risk of health problems, missing data and disengagement.

Monday, 4:00–5:00 PM

AAAI-16 Invited Talk:

What We Should Think about Regarding the Future of Machine Intelligence

Nick Bostrom (Oxford University)
The prospect of machine superintelligence (even if very uncertain and distant) deserves some systematic analysis and discussion, since the consequences would be far-reaching. But what, specifically, are the questions we should ask? What kind of research on this topic is possible now? And what can we do mitigate the predilection of popular media for alarmist stories illustrated with screenshots from Hollywood science fiction movies?

Monday, 5:10–6:10 PM, Room 101ABC, 1st Level

IAAI-16 Robert S. Engelmore Memorial Award Lecture:

A Quarter Century of AI Applications: What We Knew Then versus What We Know Now

Reid G. Smith (i2k Connect)
See description, page 9.

Monday, 5:10–6:10 PM

AAAI-16 Invited Panel:

AI's Impact on Labor Markets

Moderator: Toby Walsh (Data61, Australia)
Will machines take over many jobs in the future? A 2013 Oxford University study predicted 47 percent of jobs in the US are at risk of automation in the next 20 years. More recently, the Chief Economist of the Bank of England predicted 50 percent of jobs in the UK are at risk of automation. How real are such threats? And what should we be doing to prepare for these changes? This panel brings together some leading thinkers in this area: Nick Bostrom, Oxford (author of Superintelligence: Paths, Dangers, Strategies), Erik Brynjolfsoon, MIT (author of 2nd Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies), Oren Etzioni, CEO of the Allen Institute for AI (serial entrepreneur) and Moshe Vardi, Rice (editor of CACM).

Tuesday, 8:50– 9:50 AM

IAAI-16 / AAAI-16 Joint Invited Talk:

Towards Artificial General Intelligence

Demis Hassabis (Google DeepMind)
In my talk I will give an overview of the ambitious research program at DeepMind, including some of our latest advances. I will also discuss some of the key challenges we are currently tackling, in the quest to build Artificial General Intelligence, and the approaches we are taking to solve them.

Tuesday, 4:00–5:00 PM

AAAI-16 Invited Panel:

Autonomous Flight

Panelists: Mykel Kochenderfer (cochair, Stanford University), Ella Atkins (cochair, University of Michigan), Amy Pritchett (Georgia Tech), Claire Tomlin (University of California, Berkeley), Jonathan How (MIT)
Increasingly autonomous manned and unmanned aircraft are becoming safer and more capable. The commercial transport aircraft can fly itself from origin to destination but requires a crew to handle off-nominal situations and interface with air traffic control. Commercially available small unmanned aircraft systems (SUAS) can autonomously execute a waypoint mission but have little resilience to system failures and environmental hazards. This panel will discuss key autonomy technologies and research needs that will support safer, more efficient flight. Autonomous systems must be validated and verified to meet certification requirements and also must be accepted and trusted by the flying public and communities over which SUAS will operate at low altitudes. Panelists will discuss critical autonomy applications including emergency flight management, detect-and-avoid, geofencing for airspace segregation, cooperative planning and control, and challenges in operator situational awareness and training.

Wednesday, 8:50–9:50 AM, Room 301C, 3rd Level

AAAI-16 Invited Talk:

Reachability and Learning for Hybrid Systems

Claire Tomlin (University of California, Berkeley)
Hybrid systems allow for the composition of continuous and discrete state dynamics, and have been used in aircraft flight management, air and ground transportation systems, robotic vehicles and human-automation systems. These systems use discrete logic to manage complexity and more naturally accommodate linguistic and qualitative information. In this talk, we will present reachable set methods for controller design to satisfy safety specifications, and we will present a toolbox of methods combining reachability with machine learning techniques, to enable performance improvement while maintaining safety. We will illustrate these "safe learning" methods on UAV applications.

Monday–Tuesday, February 15–16, 106B, 1st Level

Senior Member Presentations

The AAAI-16 Senior Member Presentation track comprises two subtracks: Summary Talks: established researchers provide broad talks on a well-developed body of research or an important new research area; and Blue Sky Talks: authors present ideas and visions that can stimulate the research community to pursue new directions, such as new problems, new application domains, or new methodologies, that are likely to stimulate significant new research. Four summary talks and four Blue Sky talks will be presented (please see the conference schedule on pages 18 and 23). For more information about the Blue Sky Awards, please see page 4.

Sunday, Tuesday, and Wednesday, February 14, 16, and 17, 106B, 1st Level

What's Hot Talks

The AAAI-16 "What's Hot" track aims to present exciting recent advances and current challenges in subareas of Artificial Intelligence with major conferences or competitions. Fifteen "What's Hot" presentations will be presented, representing the AAMAS, ILP, ICCV, ICRA, IUI, NAACL, UAI, and SoCS conferences, as well as the Angry Birds, ASP, General Video Game AI, Kaggle, Planning, RoboCup, Winograd Schema Challenge competitions (please see the conference schedule on pages 15, 22, and 24).

AAAI Presidential Address

Thomas G. Dietterich

Sunday, February 14, 9:00–9:50 AM, 301A, 3rd Level

Thomas G. Dietterich is Distinguished Professor of EECS at Oregon State University. He received the A.B. from Oberlin College (1977), an M.S. from the University of Illinois, Urbana (1979), and the Ph.D. from Stanford University (1985). Dietterich studies fundamental problems in AI and machine learning motivated by important challenges in emerging applications — specifically, computational ecology and ecosystem management, computer security, and robust AI systems.

Dietterich is a Fellow of the AAAI, ACM, and AAAS. He served as Technical Program cochair of AAAI 1990 and AAAI Councilor. Other roles include program chair of NIPS 2000, general chair of NIPS 2001, NIPS Foundation trustee, and founding president of the International Machine Learning Society (2001-2008). Dietterich served as Executive Editor of the journal Machine Learning (1992-98) and he cofounded the Journal of Machine Learning Research. From 1998-2015, he edited the MIT Press series on Adaptive Computation and Machine Learning, and from 1998 to the present he has moderated the machine learning area of arXiv. He has advised government funding agencies including DARPA (Information Science and Technology advisory board, 2004-7) and NSF (Advisory Committee for Cyber Infrastructure, 2009-12).

Robert S. Engelmore Memorial Award Lecture

A Quarter Century of AI Applications: What We Knew Then versus What We Know Now

Monday, 5:10–6:10 PM, Room 101ABC, 1st Level

Reid G. Smith (i2k Connect)
AI applications have been built, deployed and used for industrial and government purposes for many years. The experiences have been documented in IAAI conference proceedings since 1989. Over that period, the breadth of applications has expanded many times over. The diversity of technical approaches has also evolved from rule-based expert systems to deep learning with many modern systems employing a variety of techniques and subsystems. This presentation will focus on contrasting what (we thought) we knew about building, deploying and using AI applications in the early years with what (we think) we know now.

Robotics Events

AAAI-16 showcases robotics in a variety of programs, including special technical tracks, student robotics paper presentations, Robotics: Science and Systems Early Career Spotlight talks, as well as an exhibition of robotics research from academia and industry. AAAI thanks *AI Journal* and the National Science Foundation for their generous support of these events.

Robotics Student Fellowship Talks

Sunday, 11:30 AM–12:30 PM

Rock, Paper, Scissors: What Can I Use in Place of a Hammer?
Madhura Thosar

Information-Driven Exploration to Complete and Refine Spatio-Temporal Maps
João Machado Santos

Neural Robotics — A New Perspective
Peter Ondrúska.

Sunday, 4:00–5:00 PM

Learning Compositional Object Representation with Functionality
Safoura Lakani

Multi-Fingered Robotic Grasping from Visual and Tactile Sensory Input
Jacob Varley

Hierarchical and Structured Representations of Knowledge in Robotics
Roberto Capobianco

Monday, 2:00–3:30 PM

Robotic Nurse in the Operating Room: Conciliating Time with Intention
Tian Zhou

Autonomous Exploration Using UAVs
Sai Vemprala

Knowledge-Enabled Reasoning for Compliant Robotic Manipulation
Daniel Leidner

Object Contact Recognition and Localization by Employing Tactile Patterns, Kinaesthetic Cues and Visual Maps
Shan Luo

Robotics: Science and Systems Early Career Spotlight Talks

Sunday, 11:30 AM–12:30 PM

DeepMPC: Learning Deep Latent Features for Model Predictive Control
Ian Lenz, Ross Knepper, Ashutosh Saxena

Robust Trajectory Optimization: A Cooperative Stochastic Game Theoretic Approach
Yunpeng Pan, Kaivalya Bakshi, Evangelos Theodorou

Dealing with Difficult Instances of Object Rearrangement
Athanasios Krontiris, Kostas Bekris

Sunday, 4:00–5:00 PM

Multipolicy Decision-Making for Autonomous Driving via Changepoint-Based Behavior Prediction
Enric Galceran, Alexanßder Cunningham, Ryan Eustice, Edwin Olson

Grounding English Commands to Reward Functions (M18)
James MacGlashan, Monica Babes-Vroman, Marie desJardins, Michael Littman, Smaranda Muresan, Shawn Squire, Stefanie Tellex, Dilip Arumugam, Lei Yang

Adaptive Coordination Strategies for Human-Robot Handovers
Chien-Ming Huang, Maya Cakmak, Bilge Mutlu

Monday, 2:00–3:30 PM

Two-Step Focused Inference for Resource-Constrained Collision-Free Navigation
Beipeng Mu, Ali-akbar Agha-mohammadi, Liam Paull, Matthew Graham, Jonathan How, John Leonard

Long-Horizon Robotic Search and Classification Using Sampling-Based Motion Planning
Geoff Hollinger

rCRF: Recursive Belief Estimation over CRFs in RGB-D Activity Videos
Ozan Sener, Ashutosh Saxena

Robotics Exhibition

Exhibit Hours:
Saturday–Monday : 10:00 AM–5:00 PM
Tuesday: 10:00 AM–4:00 PM

Androidbot Colony

Kyoto University / Okinawa Institute of Science and Technology, Table #: R2
Contact: Jiexin Wang wang-j@oist.jp
sites.google.com/site/jiexinwang2015/smartphone-robot

Androidbot Colony was developed with the target of developing a low-cost and high-performance autonomous robotic platform for educational use and multi-agent research. A single agent is made up of an Android phone, an IOIO-OTG board and HUB-EE wheels. It can currently achieve various behaviors such as standing-up, balancing, stable running as a balancer, or visual detection as a stable runner.

Duke Robotics

Duke University, Table #: R4
Contact: George Konidaris
robotics.duke.edu
Come and meet a few members of the newly launched Duke Robotics!

Jarvis

Arizona State University, Table #: R7
Contact: Yu ("Tony") Zhang
(yzhan442@asu.edu)
www.public.asu.edu/~yzhan442/robots.html

Jarvis is a helpful robot in assembling block structures. It can work collaboratively with humans on various assembly tasks. Jarvis is capable of learning from human collaborations and construct models accordingly to synthesize a coordination plan.

Robots of the ASU Robot Learning Class

Arizona State University Interactive Robotics Lab, Table #: R3
Contact: Heni Ben Amor
lab.engineering.asu.edu/interactive-robotics/

We are presenting two robots developed in the Robotics class during the fall semester at Arizona State University. Our first robot is an autonomous mobile platform that uses a LIDAR to identify and avoid objects. The second platform is an autonomous robot arm. Both robots where built and programmed as part of a lecture at ASU.

Sponsor & Exhibit Program

Sunday–Tuesday, February 14–16
West Arcade, 1st Level

The AAAI-16 sponsor and exhibit program provides an opportunity for AI-related companies and publishers to support the goals of AAAI and reach out to AI professionals. In some cases, sponsors have elected to exhibit at AAAI-16. AAAI wishes to thank all sponsors and exhibitors for their participation at AAAI-16! (*See Exhibit Map, page 16*).

Exhibit Hours

Sunday, February 14: 10:00 AM–5:00 PM
Monday, February 15:10:00 AM–5:00 PM
Tuesday, February 16:10:00 AM–4:00 PM

Exhibitors / Sponsors

ACM/SIGAI (Sponsor)

sigai.acm.org
Contact: Yolanda Gil

SIGAI is the ACM Special Interest Group on Artificial Intelligence. Its AI Matters newsletter disseminates news and articles of interest to the AI community. SIGAI supports many student activities, including the new SIGAI Career Network and Conference for early career researchers, conference travel, and the AAAI/SIGAI Doctoral Consortium.

AI Journal (Sponsor)

ijcai.org/aijd.php

*Artificial Intelligence Journa*l (AIJ) is one of the longest established and most respected journals in AI, and since it was founded in 1970, it has published many of the key papers in the field. The operation of the editorial board is supported financially through an arrangement with AIJ's publisher, Elsevier. The editorial board of *Artificial Intelligence* is now in the unique position of being able to make available substantial funds, of the order of EUR 175,000 per annum to support the promotion and dissemination of AI research.

AI Topics (Exhibitor)

Table #2
aaai.org/aitopics

AI Topics is the Premier Source of Information about AI!

- Stop by the AITopics booth to pick up a luggage tag
- Sign up for the free AI-Alert service for weekly summaries of news stories that have mentioned AI
- See what AITopics can provide for your classroom instruction or term papers
- Suggest improvements
- Review our list of classic papers to add your favorites

Baidu (Exhibitor/Sponsor)

Table #13
www.baidu.com

Baidu, Inc. is the leading Chinese language Internet search provider. As a technology- based media company, Baidu aims to provide the best and most equitable way for people to find they're looking for. In addition to serving individual Internet search users, Baidu provides an effective platform for businesses to reach potential customers. Baidu's ADSs trade on the NASDAQ Global Select Market under the symbol "BIDU." Currently, ten ADSs represent one Class A ordinary share.

Cambridge University Press (Exhibitor)

Table #5
Contact: James Murphy
www.cambridge.org/us/academic

Cambridge's publishing in books and journals combines state-of-the-art content with the highest standards of scholarship, writing and production. Visit our stand to browse new titles, available at a 20% discount, and to pick up sample issues of our journals. Visit our website to see everything we do.

CRA Computing Community Consortium (CCC) (Sponsor)

cra.org/ccc/visioning/blue-sky/

The mission of the Computing Research Association's Computing Community Consortium (CCC) is to catalyze the computing research community and enable the pursuit of innovative, high-impact research. CCC conducts activities that strengthen the research community, articulate compelling research visions, and align those visions with pressing national and global challenges. CCC communicates the importance of those visions to policymakers, government and industry stakeholders, the public, and the research community itself.

Disney Research (Sponsor)

https://www.disneyresearch.com

The Walt Disney Company has a long history of innovation and today the company focuses on content creation and the tools required to tell stories and create interactive experiences in all forms of media. Disney Research honors Walt Disney's legacy of innovation by exploring novel technologies. Disney Research labs provide a research foundation for the many business units within The Walt Disney Company. For example: Walt Disney Feature Animation, Walt Disney Imagineering, Parks & Resorts, Walt Disney Studios Motion Pictures, Disney Interactive Media Group, ESPN, Marvel, Industrial Light and Magic, and Pixar Animation Studios.

Disney Research has sibling labs located in Pittsburgh, Zurich, Los Angeles and Boston. To learn more about current opportunities, please visit www.disneyresearch.com/careers

The Walt Disney Company is an Affirmative Action / Equal Opportunity Employer and encourages applications from members of under-represented groups.

IBM Research (Exhibitor/Sponsor)

Table #9
http://www.research.ibm.com

IBM Research is a research and development organization consisting of twelve laboratories on six continents. IBM has led innovation in all disciplines of AI, culminating in intelligent agents like Watson, the question-answering computing system that defeated human world champions on the Jeopardy! television quiz show. As part of IBM's Cognitive Business initiative, IBM Research is continually augmenting Watson's cognitive capabilities, thereby enabling real-world transformations in diverse domains. IBM Research is home to 5 Nobel Laureates, 9 US National Medals of Technology, 5 US National Medals of Science, 6 Turing Awards, and 13 Inductees in the National Inventors Hall of Fame.

Infosys Limited (Exhibitor/Sponsor)

Table #10-11
www.infosys.com

Infosys is a global leader in consulting, technology, outsourcing and next-generation services. We enable clients, in more than 50 countries, to stay a step ahead of emerging business trends and outperform the competition. We help them transform and thrive in a changing world by cocreating breakthrough solutions that combine strategic insights and execution excellence. Visit www.infosys.com to see how Infosys (NYSE: INFY), with US$9 billion in annual revenues and 187,000+ employees, is helping enterprises renew themselves while also creating new avenues to generate value.

Lionbridge (Exhibitor/Sponsor)

Table #12
http://www.lionbridge.com

Enabling cognitive systems to overcome language and cultural limitations is one of the greatest challenges that technology providers are facing in their effort to reach out to new markets and users. Lionbridge proudly contributes to the vision of global connectivity and equal access to information by helping large organizations, start-ups and research centres develop and implement their solutions. Our "Services for Cognitive Systems" (SCS) unit is your one-stop-shop and a reliable partner. Your satisfaction, the realization of your vision and your end-user experience are our top priorities.

Microsoft Research (Exhibitor/Sponsor)

Table #8
http://research.microsoft.com/

Since its founding in 1991, Microsoft Research has grown into one of the largest research organizations in the world. With more than 1,100 scientists and engineers at multiple labs around the world, the mission has stayed the same for over 20 years: to advance the frontiers of computing through basic and applied research, and to impact the products and services of Microsoft through our inventions.

Morgan & Claypool Publishers (Exhibitor)

Table #6
Samantha Draper (draper@morganclaypool.com)
Michael Morgan (morgan@morganclaypool.com)
store.morganclaypool.com; www.morganclaypool.com

Morgan & Claypool is an independent book publisher for the computer and information Sscience, engineering, life sciences, and physics research communities. We publish 75 to 150 page "lectures," which are longer and more detailed than journal articles but not as unwieldy as handbooks or monographs. We are a firmly established and trusted provider of overviews on critical research or development topics written (and edited) by expert contributors to the field. Morgan & Claypool offers content in a wide variety of options including print, individual eBooks (PDF, ePub), and scalable digital libraries for institutions.

The MIT Press (Exhibitor)

Table #1
Marie Lee, Senior Acquisitions Editor
http://mitpress.mit.edu

The MIT Press publishes extensively in the fields of artificial intelligence and robotics. Please come by Table #1 to see our new and classic tiles and receive a 30% discount.

The Sixth Symposium on Educational Advances in Artificial Intelligence

The Sixth Symposium on Educational Advances in Artificial Intelligence will be held Saturday and Sunday, February 13-14. All sessions will be held in Room 106B, 1st level. Accepted paper and Model AI Assignment talks will be 20 minutes each. Poker Squres talks will be 15 minutes each. Poster lightning talks will be 5 minutes each.

Saturday, February 13

9:40–9:40
EAAI-16 Welcome
Todd Neller and Sven Koenig

9:40–10:40
EAAI-16 Invited Talk
Peter Norvig

10:40–11:00
EAAI-16 Coffee Break

11:00–12:00
EAAI-16 Accepted Papers I
The Turing Test in the Classroom
Lisa Torrey, Karen Johnson, Sid Sondergard, Pedro Ponce, Laura Desmond

Design of an Online Course on Knowledge-Based AI
Ashok K. Goel, David A. Joyner

From the Lab to the Classroom and Beyond: Extending a Game-Based Research Platform for Teaching AI to Diverse Audiences
Nicole Sintov, Debarun Kar, Thanh Nguyen, Fei Fang, Kevin Hoffman, Arnaud Lyet, Milind Tambe

12:00–1:30
EAAI-16 Lunch Break

1:30–2:30
EAAI-16 Model AI Assignments I
A Simple Genetic Algorithm
James Marshall

A Genetic Algorithm for Robby the Robot
James Marshall

An Introduction to k-Means Clustering
Todd W. Neller and Laura E. Brown

2:30–3:30
EAAI-16 Poker Squares: Day 1
Introduction
Todd Neller

Using Domain Knowledge to Improve Monte-Carlo Tree Search Performance in Parameterized Poker Squares
Robert Arrington, Clay Langley, Steven Bogaerts

BeeMo, a Monte Carlo Simulation Agent for Playing Parameterized Poker Squares
Karo Castro-Wunsch, William Maga, Calin Anton

Learning and Using Hand Abstraction Values for Parameterized Poker Squares
Todd W. Neller, Colin M. Messinger, Zuozhi Yang

3:30–4:00
EAAI-16 Coffee Break

4:00–5:00
EAAI-16 Model AI Assignments II
Python Console-Animation Suite
Lisa Torrey

An Introduction to Classification: A CS2 Object-Oriented Programming Project
Nate Derbinsky

Adventures with Prolog: Entering the Dungeon Lord's Lair
Thomas E. Allen, Andrew A. Ward, Judy Goldsmith, and Nahom Muluneh

Sunday, February 14

10:00–11:00
EAAI-16: Accepted Papers II
Creating Interactive and Visual Educational Resources for AI
Sameer Singh, Sebastian Riedel

Teaching Big Data Analytics Skills with Intelligent Workflow Systems
Yolanda Gil

Conceptualizing Curse of Dimensionality with Parallel Coordinates
G Devi, Charu Chauhan, Sutanu Chakraborti

11:30–12:30
EAAI-16: Modern AI Course Panel: Day 2
Panelists: Michael Wollowski, Robert Selkowitz, Laura Brown, Ashok Goel, George Luger, Jim Marshall, Andrew Neel, Todd Neller and Peter Norvig

2:00–2:15
EAAI Outstanding AI Educator Award
Stuart Russell and Peter Norvig

2:15–2:45
Poster Lightning Talks
IRobot: Teaching the Basics of Artificial Intelligence in High Schools
Harald Burgsteiner, Martin Kandlhofer, Gerald Steinbauer

An Online Logic Programming Development Environment
Christian Reotutar, Mbathio Diagne, Evgenii Balai, Edward Wertz, Peter Lee, Shao-Lon Yeh, Yuanlin Zhang

Teaching Automated Strategic Reasoning Using Capstone Tournaments
Oscar Veliz, Marcus Gutierrez, Christopher Kiekintveld

Training Watson— A Cognitive Systems Course
Michael Wollowski

A.I. as an Introduction to Research Methods in Computer Science
Raghuram Ramanujan

Using Declarative Programming in an Introductory Computer Science Course for High School Students
Maritza Reyes, Cynthia Perez, Rocky Upchurch, Timothy Yuen, Yuanlin Zhang

2:45–3:00
EAAI-16 Break

3:00–5:00
Hands-On Robotics Workshop

Faculty from Olin and Harvey Mudd Colleges will present some of the novel, accessible robots used both for classes and research investigations. Platforms and demos will be available to participants to try out after a short overview.

Registration

Conference registration is located on the third level of the Phoenix Convention Center beginning Friday, February 12. Registration hours are:

Friday, February 12	7:30 AM–5:00 PM
Saturday, February 13	8:00 AM–5:00 PM
Sunday, February 14	8:00 AM–5:00 PM
Monday, February 15	8:30 AM–5:00 PM
Tuesday, February 16	8:30 AM–5:00 PM
Wednesday, February 17	8:30 AM–11:00 AM

AAAI attendees who wish to register onsite will be asked to complete an onsite form, and then process their own registration at the AAAI-16 registration site: www.regonline.com/aaai16 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 aaai.org/AAAI16 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 Accessibility

The Phoenix Convention Center & Venues is an Americans with Disabilities Act (ADA) compliant facility and we work with event organizers to provide reasonable accommodations for all guests. Guests that need accommodations such as large print materials, Braille, sign language/oral interpreters or other special needs during an event, should contact the event organizer. The design includes accessible parking and entrances, wheelchair ramps, multiple elevators, automatic doors and accessible restroom facilities.

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, as well as all social events. Smoking is not allowed in any of the technical, poster/demo, tutorial, workshop, or IAAI sessions.

Business Center (UPS Store)

The UPS Store is open six days a week with extended hours available during event activity. The store is located in the Convention Center West Building on 2nd Street and can be reached at 602-251-0135.

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. Information about the AAAI / ACM SIGAI AI Job Bulletin Board is available on page 6.

Phoenix Information/Visitors Center

Venue Hosts are located throughout the Convention Center. They are able to assist guests with information related to the facility such as meeting location information, restrooms, or parking. In addition they are familiar with the downtown happenings including the best places to eat, shop, and relax.

Located across from the Hyatt, the Visitor's Center is the place to get assistance with itinerary planning to sightseeing and cultural attractions throughout the state.

Ask an Ambassador

Look for the Downtown Ambassadors wearing orange shirts with ASK ME on the back. They'll help with recommendations and get you where you need to go.

Internet Access

Complimentary WiFi is available in most public areas at the Phoenix Convention Center. AAAI-16 attendees will be provided with access codes for the meeting areas onsite. AAAI-16 WiFi access is sponsored by Lionbridge.

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.

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 Reports

AAAI proceedings will be available after the conference in electronic format only via the AAAI Digital Library. Preliminary PDFs of all papers are available via the online AAAI-16 schedule. For more information, please inquire at the registration desk.

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.

Talk Length Key

AAAI Talks = 18 minutes
AAAI Spotlight Talks = 2 minutes
Senior Member Blue Sky Talks = 18 minutes
Senior Member Summary Talks = 18 minutes
What's Hot Talks = 15 minutes
Robotics Invited RSS Talks = 18 minutes
Robotics Student Fellowship Talks = 2 minutes
IAAI Deployed Talks = 35 minutes
IAAI Emerging Talks = 30 minutes
IAAI Challenge Talk = 10 & 10 Q&A

Disclaimer

In offering the Phoenix Convention Center, Hyatt Regency Phoenix Hotel, GES Exposition Services, PSAV, 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-16/IAAI-16 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.
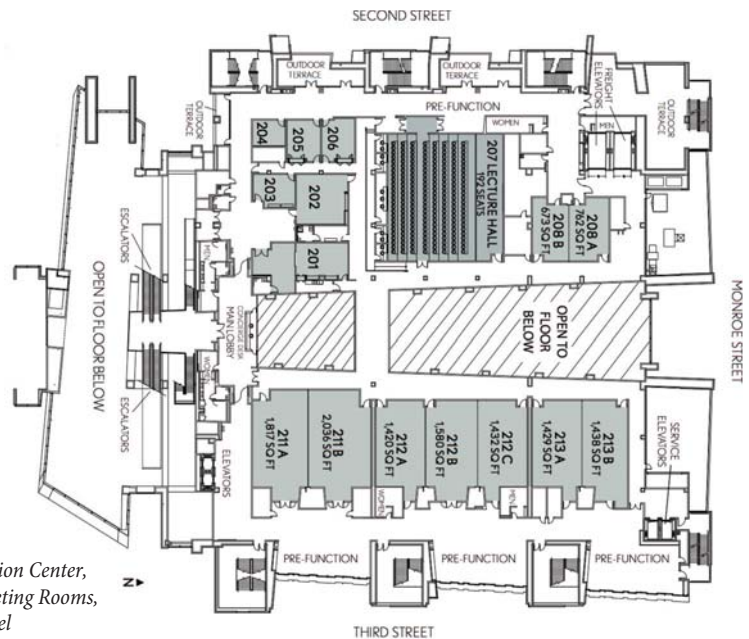
Phoenix Convention Center,
West Building Meeting Rooms,
200 Level

8:30–9:50

WEST 301A, 3RD LEVEL

8:30-8:55

Welcome and Opening Remarks, AAAI Organizational Awards/Honors, Senior Member Blue Sky Awards

9:00-9:50

AAAI Presidential Address
Thomas G. Dietterich

9:50-10:00
Transition

10:00-11:00

WEST 101A, 1ST LEVEL

ML1: Learning Preferences and Behavior

Oral Presentations

Learning the Preferences of Ignorant, Inconsistent Agents
Owain Evans, Andreas Stuhlmueller, Noah D. Goodman

Fusing Social Networks with Deep Learning for Volunteerism Tendency Prediction
Yongpo Jia, Xuemeng Song, Jingbo Zhou, Li Liu, Liqiang Nie, David S. Rosenblum

Minimizing User Involvement for Learning Human Mobility Patterns from Location Traces
Basma Alharbi, Abdulhakim Qahtan, Xiangliang Zhang

Poster Spotlight Talks

Predicting Online Protest Participation of Social Media Users
Suhas Ranganath, Fred Morstatter, Xia Hu, Jiliang Tang, Suhang Wang, Huan Liu

Fortune Teller: Predicting Your Career Path
Ye Liu, Luming Zhang, Liqiang Nie, Yan Yan, David S. Rosenblum

Predicting the Next Location: A Recurrent Model with Spatial and Temporal Contexts
Qiang Liu, Shu Wu, Liang Wang, Tieniu Tan

WEST 101B, 1ST LEVEL

ML2: Machine Learning for Language and Speech

Oral Presentations

Look, Listen and Learn — A Multimodal LSTM for Speaker Identification
Jimmy Ren, Yongtao Hu, Yu-Wing Tai, Chuan Wang, Li Xu, Wenxiu Sun, Qiong Yan

Agreement on Target-Bidirectional LSTMs for Sequence-to-Sequence Learning
Lemao Liu, Andrew Finch, Masao Utiyama, Eiichiro Sumita

Discovering User Attribute Stylistic Differences via Paraphrasing
Daniel Preotiuc-Pietro, Wei Xu, Lyle Ungar

Poster Spotlight Talks

Non-Linear Similarity Learning for Compositionality
Masashi Tsubaki, Kevin Duh, Masashi Shimbo, Yuji Matsumoto

Age of Exposure: A Model of Word Learning
Mihai Dascalu, Danielle S. McNamara, Scott Crossley, Stefan Trausan-Matu

Unsupervised Lexical Simplification for Non-Native Speakers
Gustavo H. Paetzold, Lucia Specia

WEST 101C, 1ST LEVEL

Search1: Constraints

Oral Presentations

Steiner Tree Problems with Side Constraints Using Constraint Programming
Diego de Uña, Graeme Gange, Peter Schachte, Peter J. Stuckey

Breaking More Composition Symmetries Using Search Heuristics
Jimmy H. M. Lee, Zichen Zhu

The Meta-Problem for Conservative Mal'tsev Constraints
Clément Carbonnel

Poster Spotlight Talks

Counting-Based Search for Constraint Optimization Problems
Gilles Pesant

CAPReS: Context Aware Persona Based Recommendation for Shoppers
Joydeep Banerjee, Gurulingesh Raravi, Manoj Gupta, Sindhu K. Ernala, Shruti Kunde, Koustuv Dasgupta

Multi-Variable Agents Decomposition for DCOPs
Ferdinando Fioretto, William Yeoh, Enrico Pontelli

WEST 102A, 1ST LEVEL

VIS1: Video/Image Features

Oral Presentations

Labeling the Features, Not the Samples: Efficient Video Classification with Minimal Supervision
Marius Leordeanu, Alexandra Radu, Shumeet Baluja, Rahul Sukthankar

Submodular Asymmetric Feature Selection in Cascade Object Detection
Baosheng Yu, Meng Fang, Dacheng Tao, Jie Yin

Group Cost-Sensitive Boosting for Multi-Resolution Pedestrian Detection
Chao Zhu, Yuxin Peng

Poster Spotlight Talks

Unsupervised Co-activity Detection from Multiple Videos Using Absorbing Markov Chain
Donghun Yeo, Bohyung Han, Joon Hee Han

MC-HOG Correlation Tracking with Saliency Proposal
Guibo Zhu, Jinqiao Wang, Yi Wu, Xiaoyu Zhang, Hanqing Lu

Structured Output Prediction for Semantic Perception in Autonomous Vehicles
Rein Houthooft, Cedric De Boom, Stijn Verstichel, Femke Ongenae, Filip De Turck

WEST 102B, 1ST LEVEL

NLP1: Text Classification

Oral Presentations

Robust Text Classification in the Presence of Confounding Bias
Virgile Landeiro, Aron Culotta

Text Classification with Heterogeneous Information Network Kernels
Chenguang Wang, Yangqiu Song, Haoran Li, Ming Zhang, Jiawei Han

Text Matching as Image Recognition
Liang Pang, Yanyan Lan, Jiafeng Guo, Jun Xu, Shengxian Wan, Xueqi Cheng

Poster Spotlight Talks

Personalized Microblog Sentiment Classification via Multi-Task Learning
Fangzhao Wu, Yongfeng Huang

Semi-Supervised Multinomial Naive Bayes for Text Classification by Leveraging Word-Level Statistical Constraint
Li Zhao, Minlie Huang, Ziyu Yao, Rongwei Su, Yingying Jiang, Xiaoyan Zhu

Gated Neural Networks for Targeted Sentiment Analysis
Meishan Zhang, Yue Zhang, Duy-Tin Vo

WEST 102C, 1ST LEVEL

GTEP1: Markets

Oral Presentations

Fast Optimal Clearing of Capped-Chain Barter Exchanges
Benjamin Plaut, John P. Dickerson, Tuomas Sandholm

Learning Market Parameters Using Aggregate Demand Queries
Xiaohui Bei, Wei Chen, Jugal Garg, Martin Hoefer, Xiaoming Sun

Assignment and Pricing in Roommate Market
Pak Hay Chan, Xin Huang, Zhengyang Liu, Chihao Zhang, Shengyu Zhang

Poster Spotlight Talks

Incentives for Strategic Behavior in Fisher Market Games
Bo Tang, Xiaotie Deng, Ning Chen, Hongyang Zhang

Optimizing Trading Assignments in Water Right Markets
Yicheng Liu, Pingzhong Tang, Tingting Xu, Hang Zheng

Autonomous Electricity Trading Using Time-Of-Use Tariffs in a Competitive Market
Daniel Urieli, Peter Stone

WEST 106A, 1ST LEVEL

AIW1: Ontologies and Knowledge Graphs

Oral Presentations

Ontology-Mediated Queries for NOSQL Databases
Marie-Laure Mugnier, Marie-Christine Rousset, Federico Ulliana

Column-Oriented Datalog Materialization for Large Knowledge Graphs
Jacopo Urbani, Ceriel Jacobs, Markus Krötzsch

Fine-Grained Semantic Conceptualization of FrameNet
Jin-woo Park, Seung-won Hwang, Haixun Wang

Poster Spotlight Talks

Knowledge Graph Completion with Adaptive Sparse Transfer Matrix
Guoliang Ji, Kang Liu, Shizhu He, Jun Zhao

Locally Adaptive Translation for Knowledge Graph Embedding
Yantao Jia, Yuanzhuo Wang, Hailun Lin, Xiaolong Jin, Xueqi Cheng

Representation Learning of Knowledge Graphs with Entity Descriptions
Ruobing Xie, Zhiyuan Liu, Jia Jia, Huanbo Luan, Maosong Sun

WEST 106C, 1ST LEVEL

IAAI-16: Machine Learning/Data Mining I: Tourism and Climate

Wikipedia in the Tourism Industry: Forecasting Demand and Modeling Usage Behavior
Pejman Khadivi, Naren Ramakrishnan

A Hidden Markov Model Approach to Infer Timescales for High-Resolution Climate Archives
Mai Winstrup

11:00-11:30
Coffee Break

11:30-12:30

WEST 101A, 1ST LEVEL

CP1: Classic Paper Award Presentations (11:30-12:06)

The Interactive Museum Tour-Guide Robot
Wolfram Burgard (speaker), Armin B. Cremers, Dieter Fox, Dirk Hähnel, Gerhard Lakemeyer, Dirk Schulz, Walter Steiner, Sebastian Thrun

Boosting Combinatorial Search through Randomization
Carla P. Gomes (speaker), Bart Selman, Henry Kautz

WEST 101B, 1ST LEVEL

ML3: Deep Learning Applications

Oral Presentations

Deep Learning for Algorithm Portfolios
Andrea Loreggia, Yuri Malitsky, Horst Samulowitz, Vijay Saraswat

Poker-CNN: A Pattern Learning Strategy for Making Draws and Bets in Poker Games Using Convolutional Networks
Nikolai Yakovenko, Liangliang Cao, Colin Raffel, James Fan

Deep Tracking: Seeing Beyond Seeing Using Recurrent Neural Networks
Peter Ondruska, Ingmar Posner

Poster Spotlight Talks

Learning Deep Representation from Big and Heterogeneous Data for Traffic Accident Inference
Quanjun Chen, Xuan Song, Harutoshi Yamada, Ryosuke Shibasaki

Face Video Retrieval via Deep Learning of Binary Hash Representations
Zhen Dong, Su Jia, Tianfu Wu, Mingtao Pei

WEST 101C, 1ST LEVEL

Search2: Search

Oral Presentations

On the Completeness of Best-First Search Variants that Use Random Exploration
Richard Valenzano, Fan Xie

Bidirectional Search That Is Guaranteed to Meet in the Middle
Robert C. Holte, Ariel Felner, Guni Sharon, Nathan R. Sturtevant

Look-Ahead with Mini-Bucket Heuristics for MPE
Rina Dechter, Kalev Kask, William Lam, Javier Larrosa

Poster Spotlight Talks

A Combinatorial Search Perspective on Diverse Solution Generation
Satya Gautam Vadlamudi, Subbarao Kambhampati

Two Efficient Local Search Algorithms for Maximum Weight Clique Problem
Yiyuan Wang, Shaowei Cai, Minghao Yin

Combining Bounding Boxes and JPS to Prune Grid Pathfinding
Steve Rabin, Nathan R. Sturtevant

WEST 102A, 1ST LEVEL

VIS2: Video Analysis

Oral Presentations

Zero-Shot Event Detection by Multimodal Distributional Semantic Embedding of Videos
Mohamed Elhoseiny, Jingen Liu, Hui Cheng, Harpreet Sawhney, Ahmed Elgammal

Dynamic Concept Composition for Zero-Example Event Detection
Xiaojun Chang, Yi Yang, Guodong Long, Chengqi Zhang, Alexander G. Hauptmann

Robust Complex Behaviour Modeling at 90Hz
Xiangyu Kong, Yizhou Wang, Tao Xiang

Poster Spotlight Talks

Diversified Dynamical Gaussian Process Latent Variable Model for Video Repair
Hao Xiong, Tongliang Liu, Dacheng Tao

Concepts Not Alone: Exploring Pairwise Relationships for Zero-Shot Video Activity Recognition
Chuang Gan, Ming Lin, Yi Yang, Gerard de Melo, Alexander G. Hauptmann

Multi-View 3D Human Tracking in Crowded Scenes
Xiaobai Liu

WEST 102B, 1ST LEVEL

NLP2: Features and Event Interpretation

Oral Presentations

Exploring Multiple Feature Spaces for Novel Entity Discovery
Zhaohui Wu, Yang Song, C. Lee Giles

Improving Twitter Sentiment Classification Using Topic-Enriched Multi-Prototype Word Embeddings
Yafeng Ren, Yue Zhang, Meishan Zhang, Donghong Ji

Reading the Videos: Temporal Labeling for Crowdsourced Time-Sync Videos Based on Semantic Embedding
Guangyi Lv, Tong Xu, Enhong Chen, Qi Liu, Yi Zheng

Poster Spotlight Talks

Acquiring Knowledge of Affective Events from Blogs Using Label Propagation
Haibo Ding, Ellen Riloff

A Probabilistic Soft Logic Based Approach to Exploiting Latent and Global Information in Event Classification
Shulin Liu, Kang Liu, Shizhu He, Jun Zhao

Identifying Sentiment Words Using an Optimization Model with L1 Regularization
Zhi-Hong Deng, Hongliang Yu, Yunlun Yang

WEST 102C, 1ST LEVEL

GTEP2: Mechanism Design

Oral Presentations

Strategyproof Peer Selection: Mechanisms, Analyses, and Experiments
Haris Aziz, Omer Lev, Nicholas Mattei, Jeffrey S. Rosenschein, Toby Walsh

A Geometric Method to Construct Minimal Peer Prediction Mechanisms
Rafael Frongillo, Jens Witkowski

Maximizing Revenue with Limited Correlation: The Cost of Ex-Post Incentive Compatibility
Michael Albert, Vincent Conitzer, Giuseppe Lopomo

Poster Spotlight Talks

False-Name-Proof Locations of Two Facilities: Economic and Algorithmic Approaches
Akihisa Sonoda, Taiki Todo, Makoto Yokoo

Ad Auctions and Cascade Model: GSP Inefficiency and Algorithms
Gabriele Farina, Nicola Gatti

Is It Harmful When Advisors Only Pretend to Be Honest?
Dongxia Wang, Tim Muller, Jie Zhang, Yang Liu

WEST 106A, 1ST LEVEL

AIW2: Knowledge Acquisition from the Web

Oral Presentations

Global Distant Supervision for Relation Extraction
Xianpei Han, Le Sun

Commonsense in Parts: Mining Part-Whole Relations from the Web and Image Tags
Niket Tandon, Charles Hariman, Jacopo Urbani, Anna Rohrbach, Marcus Rohrbach, Gerhard Weikum

Are Elephants Bigger than Butterflies? Reasoning about Sizes of Objects
Hessam Bagherinezhad, Hannaneh Hajishirzi, Yejin Choi, Ali Farhadi

Poster Spotlight Talks

Improved Neural Machine Translation with SMT Features
Wei He, Zhongjun He, Hua Wu, Haifeng Wang

To Swap or Not to Swap? Exploiting Dependency Word Pairs for Reordering in Statistical Machine Translation
Christian Hadiwinoto, Yang Liu, Hwee Tou Ng

Cross-Lingual Taxonomy Alignment with Bilingual Biterm Topic Model
Tianxing Wu, Guilin Qi, Haofen Wang, Kang Xu, Xuan Cui

WEST 106B, 1ST LEVEL

ROB1: RSS Invited, Robotics Fellowship

RSS Invited Talks

DeepMPC: Learning Deep Latent Features for Model Predictive Control
Ian Lenz, Ross Knepper, Ashutosh Saxena

Robust Trajectory Optimization: A Cooperative Stochastic Game Theoretic Approach
Yunpeng Pan, Kaivalya Bakshi, Evangelos Theodorou

Dealing with Difficult Instances of Object Rearrangement
Athanasios Krontiris, Kostas Bekris

Robotics Fellowship Talks

Rock, Paper, Scissors: What Can I Use in Place of a Hammer?
Madhura Thosar

Information-Driven Exploration to Complete and Refine Spatio-Temporal Maps
João Machado Santos

Neural Robotics — A New Perspective
Peter Ondruska, Oxford University.

WEST 106C, 1ST LEVEL

IAAI-16: Application I: Software Diagnosis and Testing

Automated Regression Testing Using Constraint Programming
Arnaud Gotlieb, Mats Carlsson, Marius Liaeen, Dusica Marijan, Alexandre Pétillon

12:30-2:00

Lunch Break

(Lunch with a Fellow — offsite)

Sunday, February 14 — 2:00 PM–4:00 PM

2:00-3:30

WEST 101A, 1ST LEVEL

ML4: Graphical Models

Oral Presentations

On Learning Causal Models from Relational Data
Sanghack Lee, Vasant Honavar

Approximate Probabilistic Inference via Word-Level Counting
Supratik Chakraborty, Kuldeep S. Meel, Rakesh Mistry, Moshe Y. Vardi

Learning Ensembles of Cutset Networks
Tahrima Rahman, Vibhav Gogate

Learning Bayesian Networks with Bounded Tree-Width via Guided Search
Siqi Nie, Cassio P. de Campos, Qiang Ji

Poster Spotlight Talks

Scalable Training of Markov Logic Networks Using Approximate Counting
Somdeb Sarkhel, Deepak Venugopal, Tuan Anh Pham, Parag Singla, Vibhav Gogate

From Exact to Anytime Solutions for Marginal Map
Junkyu Lee, Radu Marinescu, Rina Dechter, Alexander Ihler

Closing the Gap between Short and Long XORs for Model Counting
Shengjia Zhao, Sorathan Chaturapruek, Ashish Sabharwal, Stefano Ermon

Decoding Hidden Markov Models Faster than Viterbi Via Online Matrix-Vector (max, +)-Multiplication
Massimo Cairo, Gabriele Farina, Romeo Rizzi

Scaling Relational Inference Using Proofs and Refutations
Ravi Mangal, Xin Zhang, Aditya Kamath, Aditya V. Nori, Mayur Naik

Deep Neural Networks for Learning Graph Representations
Shaosheng Cao, Wei Lu, Qiongkai Xu

Inferring Multi-Dimensional Ideal Points for US Supreme Court Justices
Mohammad Raihanul Islam, K.S.M. Tozammel Hossain, Siddharth Krishnan, Naren Ramakrishnan Mail

Understanding Dominant Factors for Precipitation over the Great Lakes Region
Soumyadeep Chatterjee, Stefan Liess, Arindam Banerjee, Vipin Kumar

WEST 101B, 1ST LEVEL

ML5: Optimization and Scalability for Machine Learning

Oral Presentations

Stochastic Optimization for Kernel PCA
Lijun Zhang, Tianbao Yang, Jinfeng Yi, Rong Jin, Zhi-Hua Zhou

Unsupervised Feature Selection by Heuristic Search with Provable Bounds on Suboptimality
Hiromasa Arai, Crystal Maung, Ke Xu, Haim Schweitzer

Fast ADMM Algorithm for Distributed Optimization with Adaptive Penalty
Changkyu Song, Sejong Yoon, Vladimir Pavlovic

Accelerated Sparse Linear Regression via Random Projection
Weizhong Zhang, Lijun Zhang, Rong Jin, Deng Cai, Xiaofei He

Poster Spotlight Talks

Fast Asynchronous Parallel Stochastic Gradient Descent: A Lock-Free Approach with Convergence Guarantee
Shen-Yi Zhao, Wu-Jun Li

Asynchronous Distributed Semi-Stochastic Gradient Optimization
Ruiliang Zhang, Shuai Zheng, James T. Kwok

Stochastic Parallel Block Coordinate Descent for Large-Scale Saddle Point Problems
Zhanxing Zhu, Amos J. Storkey

Fast Hybrid Algorithm for Big Matrix Recovery
Tengfei Zhou, Hui Qian, Zebang Shen, Congfu Xu

Accelerating Random Kaczmarz Algorithm Based on Clustering Information
Yujun Li, Kaichun Mo, Haishan Ye

An Alternating Proximal Splitting Method with Global Convergence for Nonconvex Structured Sparsity Optimization
Shubao Zhang, Hui Qian, Xiaojin Gong

Fast Lasso Algorithm via Selective Coordinate Descent
Yasuhiro Fujiwara, Yasutoshi Ida, Hiroaki Shiokawa, Sotetsu Iwamura

A Framework for Outlier Description Using Constraint Programming
Chia-Tung Kuo, Ian Davidson

Expected Tensor Decomposition with Stochastic Gradient Descent
Takanori Maehara, Kohei Hayashi, Ken-ichi Kawarabayashi

WEST 101C, 1ST LEVEL

MAS1: Multi-Agent Systems

Oral Presentations

Robust Execution of BDI Agent Programs by Exploiting Synergies between Intentions
Yuan Yao, Brian Logan, John Thangarajah

Global Model Checking on Pushdown Multi-Agent Systems
Taolue Chen, Fu Song, Zhilin Wu

Selectively Reactive Coordination for a Team of Robot Soccer Champions
Juan Pablo Mendoza, Joydeep Biswas, Philip Cooksey, Richard Wang, Steven Klee, Danny Zhu, Manuela Veloso

Bayesian Learning of Other Agents' Finite Controllers for Interactive POMDPs
Alessandro Panella, Piotr Gmytrasiewicz

Poster Spotlight Talks

ConTaCT : Deciding to Communicate during Time-Critical Collaborative Tasks in Unknown, Deterministic Domains
Vaibhav V. Unhelkar, Julie A. Shah

Strengthening Agents Strategic Ability with Communication
Xiaowei Huang, Qingliang Chen, Kaile Su

Multi-Agent Path Finding with Payload Transfers and the Package-Exchange Robot-Routing Problem
Hang Ma, Craig Tovey, Guni Sharon, T. K. Satish Kumar, Sven Koenig

Detection of Plan Deviation in Multi-Agent Systems
Bikramjit Banerjee, Steven Loscalzo, Daniel Lucas Thompson

Target Surveillance in Adversarial Environments Using POMDPs
Maxim Egorov, Mykel J. Kochenderfer, Jaak J. Uudmae

Solving Transition-Independent Multi-Agent MDPs with Sparse Interactions
Joris Scharpff, Diederik M. Roijers, Frans A. Oliehoek, Matthijs T. J. Spaan, Mathijs M. de Weerdt

Exploiting Anonymity in Approximate Linear Programming: Scaling to Large Multiagent MDPs
Philipp Robbel, Frans A. Oliehoek, Mykel J. Kochenderfer

Model Checking Probabilistic Knowledge: A PSPACE Case
Xiaowei Huang, Marta Kwiatkowska

A Scalable Framework to Choose Sellers in E-Marketplaces Using POMDPs
Athirai A. Irissappane, Frans A. Oliehoek, Jie Zhang

WEST 102A, 1ST LEVEL

ML6: Recommender Systems

Oral Presentations

On the Effectiveness of Linear Models for One-Class Collaborative Filtering
Suvash Sedhain, Aditya Krishna Menon, Scott Sanner, Darius Braziunas

Bayesian Matrix Completion via Adaptive Relaxed Spectral Regularization
Yang Song, Jun Zhu

Capturing Semantic Correlation for Item Recommendation in Tagging Systems
Chaochao Chen, Xiaolin Zheng, Yan Wang, Fuxing Hong, Deren Chen

Scalable Completion of Nonnegative Matrices with the Separable Structure
Xiyu Yu, Wei Bian, Dacheng Tao

Poster Spotlight Talks

Optimal Discrete Matrix Completion
Zhouyuan Huo, Ji Liu, Heng Huang

Recommending Groups to Users Using User-Group Engagement and Time-Dependent Matrix Factorization
Xin Wang, Roger Donaldson, Christopher Nell, Peter Gorniak, Martin Ester, Jiajun Bu

Top-N Recommender System via Matrix Completion
Zhao Kang, Chong Peng, Qiang Cheng

Microsummarization of Online Reviews: An Experimental Study
Rebecca Mason, Benjamin Gaska, Benjamin Van Durme, Pallavi Choudhury, Ted Hart, Bill Dolan, Kristina Toutanova, Margaret Mitchell

Inferring A Personalized Next Point-of-Interest Recommendation Model with Latent Behavior Patterns
Jing He, Xin Li, Lejian Liao, Dandan Song, William K. Cheung

VBPR: Visual Bayesian Personalized Ranking from Implicit Feedback
Ruining He, Julian McAuley

Expressive Recommender Systems through Normalized Nonnegative Models
Cyril J. Stark

STELLAR: Spatial-Temporal Latent Ranking for Successive Point-of-Interest Recommendation
Shenglin Zhao, Tong Zhao, Haiqin Yang, Michael R. Lyu, Irwin King

WEST 102B, 1ST LEVEL

ML7: Feature and Dictionary Learning

Oral Presentations

Discriminative Vanishing Component Analysis
Chenping Hou, Feiping Nie, Dacheng Tao

Robust Multi-View Subspace Learning through Dual Low-Rank Decompositions
Zhengming Ding, Yun Fu

Scalable Algorithms for Tractable Schatten Quasi-Norm Minimization
Fanhua Shang, Yuanyuan Liu, James Cheng

Discriminative Analysis Dictionary Learning
Jun Guo, Yanqing Guo, Xiangwei Kong, Man Zhang, Ran He

Poster Spotlight Talks

Semi-Supervised Dictionary Learning via Structural Sparse Preserving
Di Wang, Xiaoqin Zhang, Mingyu Fan, Xiuzi Ye

Analysis-Synthesis Dictionary Learning for Universality-Particularity Representation Based Classification
Meng Yang, Weiyang Liu, Weixin Luo, Linlin Shen

Coupled Dictionary Learning for Unsupervised Feature Selection
Pengfei Zhu, Qinghua Hu, Changqing Zhang, Wangmeng Zuo

Fixed-Rank Supervised Metric Learning on Riemannian Manifold
Yadong Mu

Unsupervised Feature Selection with Structured Graph Optimization
Feiping Nie, Wei Zhu, Xuelong Li

Consensus Guided Unsupervised Feature Selection
Hongfu Liu, Ming Shao, Yun Fu

Simultaneous Feature and Sample Reduction for Image-Set Classification
Man Zhang, Ran He, Dong Cao, Zhenan Sun, Tieniu Tan

Instance Specific Metric Subspace Learning: A Bayesian Approach
Han-Jia Ye, De-Chuan Zhan, Yuan Jiang

Learning Expected Hitting Time Distance
De-Chuan Zhan, Peng Hu, Zui Chu, Zhi-Hua Zhou

WEST 102C, 1ST LEVEL

GTEP3: Strategies and Preferences

Oral Presentations

Resistance to Corruption of Strategic Argumentation
Michael J. Maher

On the Complexity of mCP-Nets
Thomas Lukasiewicz, Enrico Malizia

Who Can Win a Single-Elimination Tournament?
Michael P. Kim, Warut Suksompong, Virginia Vassilevska Williams

Computing Possible and Necessary Equilibrium Actions (and Bipartisan Set Winners)
Markus Brill, Rupert Freeman, Vincent Conitzer

Poster Spotlight Talks

Generating CP-Nets Uniformly at Random
Thomas E. Allen, Judy Goldsmith, Hayden E. Justice, Nicholas Mattei, Kayla Raines

A Comparative Study of Ranking-Based Semantics for Abstract Argumentation
Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet

Argument Mining from Speech: Detecting Claims in Political Debates
Marco Lippi, Paolo Torroni

Modeling Users' Preferences and Social Links in Social Networking Services: A Joint-Evolving Perspective
Le Wu, Yong Ge, Qi Liu, Enhong Chen, Bai Long, Zhenya Huang

Hospital Stockpiling Problems with Inventory Sharing
Eric Lofgren, Anil Vullikanti

WEST 106A, 1ST LEVEL

APP1: Social Media

Oral Presentations

Short Text Representation for Detecting Churn in Microblogs
Hadi Amiri, Hal Daumé III

College Towns, Vacation Spots, and Tech Hubs: Using Geo-Social Media to Model and Compare Locations
Hancheng Ge, James Caverlee

From Tweets to Wellness: Wellness Event Detection from Twitter Streams
Mohammad Akbari, Xia Hu, Nie Liqiang, Tat-Seng Chua

Collective Supervision of Topic Models for Predicting Surveys with Social Media
Adrian Benton, Michael J. Paul, Braden Hancock, Mark Dredze

Poster Spotlight Talks

Unfolding Temporal Dynamics: Predicting Social Media Popularity Using Multi-Scale Temporal Decomposition
Bo Wu, Tao Mei, Wen-Huang Cheng, Yongdong Zhang

Business-Aware Visual Concept Discovery from Social Media for Multimodal Business Venue Recognition
Bor-Chun Chen, Yan-Ying Chen, Francine Chen, Dhiraj Joshi

Detect Overlapping Communities via Ranking Node Popularities
Di Jin, Hongcui Wang, Jianwu Dang, Dongxiao He, Weixiong Zhang

Recommendation with Social Dimensions
Jiliang Tang, Suhang Wang, Xia Hu, Dawei Yin, Yingzhou Bi, Yi Chang, Huan Liu

Semantic Community Identification in Large Attribute Networks
Xiao Wang, Di Jin, Xiaochun Cao, Liang Yang, Weixiong Zhang

Context-Sensitive Twitter Sentiment Classification Using Neural Network
Yafeng Ren, Yue Zhang, Meishan Zhang, Donghong Ji

News Verification by Exploiting Conflicting Social Viewpoints in Microblogs
Zhiwei Jin, Juan Cao, Yongdong Zhang, Jiebo Luo

WEST 106B, 1ST LEVEL

What's Hot Talks 1

What's Hot in Human Language Technology: Highlights from NAACL HLT 2015
Joyce Y. Chai, Anoop Sarkar, Rada Mihalcea

UAI 2015
Marina Meila

What's Hot in Intelligent User Interfaces
Shimei Pan, Oliver Brdiczka, Giuseppe Carenini, Duen Horng Chau, Per Ola Kristensson

Inductive Logic Programming: Challenges
Katsumi Inoue, Hayato Ohwada, Akihiro Yamamoto

Kaggle Competition / Winograd Schema Challenge Competition (9 minutes each)
Oren Etzioni (Kaggle) and Leora Morgenstern or Charles Ortiz (Winograd)

WEST 106C, 1ST LEVEL

(2:00-3:35)

IAAI-16: Computational Sustainability

Optimizing Energy Costs in a Zinc and Lead Mine
Alan Kinsella, Alan F. Smeaton, Barry Hurley, Barry O'Sullivan, Helmut Simonis

Deployed: Deploying PAWS: Field Optimization of the Protection Assistant for Wildlife Security
Fei Fang, Thanh H. Nguyen, Rob Pickles, Wai Y. Lam, Gopalasamy R. Clements, Bo An, Amandeep Singh, Milind Tambe, Andrew Lemieux

Data-Augmented Software Diagnosis
Amir Elmishali, Roni Stern, Meir Kalech

3:30-4:00

Coffee Break

Sunday, February 14 — 4:00 PM–8:30 PM

4:00-5:00

WEST 101A, 1ST LEVEL

ML8: Semi-Supervised Learning

Oral Presentations

Large-Scale Graph-Based Semi-Supervised Learning via Tree Laplacian Solver
Yan-Ming Zhang, Xu-Yao Zhang, Xiao-Tong Yuan, Cheng-Lin Liu

Robust Semi-Supervised Learning through Label Aggregation
Yan Yan, Zhongwen Xu, Ivor W. Tsang, Guodong Long, Yi Yang

Random Composite Forests
Giulia DeSalvo, Mehryar Mohri

Poster Spotlight Talks

Towards Safe Semi-Supervised Learning for Multivariate Performance Measures
Yu-Feng Li, James T. Kwok, Zhi-Hua Zhou

A Semi-Supervised Learning Approach to Why-Question Answering
Jong-Hoon Oh, Kentaro Torisawa, Chikara Hashimoto, Ryu Iida, Masahiro Tanaka, Julien Kloetzer

SAND: Semi-Supervised Adaptive Novel Class Detection and Classification over Data Stream
Ahsanul Haque, Latifur Khan, Michael Baron

WEST 101B, 1ST LEVEL

Search3: Optimization I

Oral Presentations

Relaxed Majorization-Minimization for Non-Smooth and Non-Convex Optimization
Chen Xu, Zhouchen Lin, Zhenyu Zhao, Hongbin Zha

Derivative-Free Optimization via Classification
Yang Yu, Hong Qian, Yi-Qi Hu

Alternative Filtering for the Weighted Circuit Constraint: Comparing Lower Bounds for the TSP and Solving TSPTW
Sylvain Ducomman, Hadrien Cambazard, Bernard Penz

Poster Spotlight Talks

Fast Proximal Linearized Alternating Direction Method of Multiplier with Parallel Splitting
Canyi Lu, Huan Li, Zhouchen Lin, Shuicheng Yan

Scaling Simultaneous Optimistic Optimization for High-Dimensional Non-Convex Functions with Low Effective Dimensions
Hong Qian, Yang Yu

A Proactive Sampling Approach to Project Scheduling under Uncertainty
Pradeep Varakantham, Na Fu, Hoong Chuin Lau

WEST 101C, 1ST LEVEL

KRR1: Causation and Diagnosis

Oral Presentations

Automated Verification and Tightening of Failure Propagation Models
Benjamin Bittner, Marco Bozzano, Alessandro Cimatti, Gianni Zampedri

Causal Explanation Under Indeterminism: A Sampling Approach
Christopher A. Merck, Samantha Kleinberg

Metaphysics of Planning Domain Descriptions
Siddharth Srivastava, Stuart Russell, Alessandro Pinto

Poster Spotlight Talks

Separators and Adjustment Sets in Markov Equivalent DAGs
Benito van der Zander, Maciej Liskiewicz

Learning Abductive Reasoning Using Random Examples
Brendan Juba

Implementing Troubleshooting with Batch Repair
Roni Stern, Meir Kalech, Hilla Shinitzky

WEST 102A, 1ST LEVEL
VIS3: Pose Estimation

Oral Presentations

Pose-Guided Human Parsing by an AND/OR Graph Using Pose-Context Features
Fangting Xia, Jun Zhu, Peng Wang, Alan L. Yuille

Articulated Pose Estimation Using Hierarchical Exemplar-Based Models
Jiongxin Liu, Yinxiao Li, Peter Allen, Peter Belhumeur

Pose-Dependent Low-Rank Embedding for Head Pose Estimation
Handong Zhao, Zhengming Ding, Yun Fu

Poster Spotlight Talks

DARI: Distance Metric and Representation Integration for Person Verification
Guangrun Wang, Liang Lin, Shengyong Ding, Ya Li, Qing Wang

Large Scale Similarity Learning Using Similar Pairs for Person Verification
Yang Yang, Shengcai Liao, Zhen Lei, Stan Z. Li

Face Behind Makeup
Shuyang Wang, Yun Fu

WEST 102B, 1ST LEVEL
NLP3: Word/Phrase Embedding

Oral Presentations

Inside Out: Two Jointly Predictive Models for Word Representations and Phrase Representations
Fei Sun, Jiafeng Guo, Yanyan Lan, Jun Xu, Xueqi Cheng

Minimally-Constrained Multilingual Embeddings via Artificial Code-Switching
Michael Wick, Pallika Kanani, Adam Pocock

Generalised Brown Clustering and Roll-Up Feature Generation
Leon Derczynski, Sean Chester

Poster Spotlight Talks

Building Earth Mover's Distance on Bilingual Word Embeddings for Machine Translation
Meng Zhang, Yang Liu, Huanbo Luan, Maosong Sun, Tatsuya Izuha, Jie Hao

A Generative Model of Words and Relationships from Multiple Sources
Stephanie L. Hyland, Theofanis Karaletsos, Gunnar Rätsch

Single or Multiple? Combining Word Representations Independently Learned from Text and WordNet
Josu Goikoetxea, Eneko Agirre, Aitor Soroa

WEST 102C, 1ST LEVEL
APP2: Security

Oral Presentations

Data Poisoning Attacks against Autoregressive Models
Scott Alfeld, Xiaojin Zhu, Paul Barford

One Size Does Not Fit All: A Game-Theoretic Approach for Dynamically and Effectively Screening for Threats
Matthew Brown, Arunesh Sinha, Aaron Schlenker, Milind Tambe

Computing Optimal Monitoring Strategy for Detecting Terrorist Plots
Zhen Wang, Yue Yin, Bo An

Poster Spotlight Talks

Multi-Defender Strategic Filtering against Spear-Phishing Attacks
Aron Laszka, Jian Lou, Yevgeniy Vorobeychik

Optimizing Personalized Email Filtering Thresholds to Mitigate Sequential Spear Phishing Attacks
Mengchen Zhao, Bo An, Christopher Kiekintveld

Behavioral Experiments in Email Filter Evasion
Liyiming Ke, Bo Li, Yevgeniy Vorobeychik

WEST 106A, 1ST LEVEL
AIW3: Machine Learning and the Web

Oral Presentations

Holographic Embeddings of Knowledge Graphs
Maximilian Nickel, Lorenzo Rosasco, Tomaso Poggio

"8 Amazing Secrets for Getting More Clicks": Detecting Clickbaits in News Streams Using Article Informality
Prakhar Biyani, Kostas Tsioutsiouliklis, John Blackmer

Hashtag-Based Sub-Event Discovery Using Mutually Generative LDA in Twitter
Chen Xing, Yuan Wang, Jie Liu, Yalou Huang, Wei-Ying Ma

Poster Spotlight Talks

A Proximal Alternating Direction Method for Semi-Definite Rank Minimization
Ganzhao Yuan, Bernard Ghanem

Lift-Based Bidding in Ad Selection
Jian Xu, Xuhui Shao, Jianjie Ma, Kuang-chih Lee, Hang Qi, Quan Lu

ClaimEval: Integrated and Flexible Framework for Claim Evaluation Using Credibility of Sources
Mehdi Samadi, Partha Talukdar, Manuela Veloso, Manuel Blum

WEST 106B, 1ST LEVEL
ROB2: RSS Invited, Robotics Fellowship

RSS Invited Talks

Multipolicy Decision-Making for Autonomous Driving via Changepoint-Based Behavior Prediction
Enric Galceran, Alexander Cunningham, Ryan Eustice, Edwin Olson

Grounding English Commands to Reward Functions (M18)
James MacGlashan, Monica Babes-Vroman, Marie desJardins, Michael Littman, Smaranda Muresan, Shawn Squire, Stefanie Tellex, Dilip Arumugam, Lei Yang

Adaptive Coordination Strategies for Human-Robot Handovers
Chien-Ming Huang, Maya Cakmak, Bilge Mutlu

Robotics Fellowship Talks

Learning Compositional Object Representation with Functionality
Safoura Lakani

Multi-Fingered Robotic Grasping from Visual and Tactile Sensory Input
Jacob Varley

Hierarchical and Structured Representations of Knowledge in Robotics
Roberto Capobianco

WEST 301A, 3RD LEVEL
IAAI-16: IAAI-16 Invited Talk:

Rethinking Computation: Substrates for Machine Intelligence
Naveen Rao (Nervana, Inc.)

5:00-5:10
Transition

5:10-6:10

WEST 301A, 3RD LEVEL
AAAI-16 Invited Talk:

From Proteins to Robots: Learning to Optimize with Confidence
Andreas Krause

6:10-7:10

WEST 211AB, 2ND LEVEL
AAAI/ACM SIGAI Job Fair

6:30-8:30

WEST 301BC, 3RD LEVEL
Poster / Demo Reception 1

All technical spotlight papers presented earlier today will be presented in poster format, as well as Doctoral Consortium abstracts and EAAI poster papers. The following demos will also be presented this evening:

Multi-Agent System Development MADE Easy
Zhiqi Shen, Han Yu, Chunyan Miao, Siyao Li, Yiqiang Chen

Artificial Intelligence for Predictive and Evidence Based Architecture Design
Mehul Bhatt, Jakob Suchan, Carl Schultz, Vasiliki Kondyli, Saurabh Goyal

co-rank: An Online Tool for Collectively Deciding Efficient Rankings Among Peers
Ioannis Caragiannis, George A. Krimpas, Marianna Panteli, Alexandros A. Voudouris

Deploying PAWS to Combat Poaching: Game-Theoretic Patrolling in Areas with Complex Terrain (Demonstration)
Fei Fang, Thanh H. Nguyen, Rob Pickles, Wai Y. Lam, Gopalasamy R. Clements, Bo An, Amandeep Singh, Milind Tambe

Predicting Gaming Related Properties from Twitter Accounts
Maria Ivanova Gorinova, Yoad Lewenberg, Yoram Bachrach, Alfredo Kalaitzis, Michael Fagan, Dean Carignan, Nitin Gautam

NLU Framework for Voice Enabling Non-Native Applications on Smart Devices
Soujanya Lanka, Deepika Pathania, Pooja Kushalappa, Pradeep Varakantham

DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution
Xiaokui Shu, Nikolay Pavlovich Laptev, Danfeng (Daphne) Yao

Using Convolutional Neural Networks to Analyze Function Properties from Images
Yoad Lewenberg, Yoram Bachrach, Ian Kash, Peter Key

Productive Aging through Intelligent Personalized Crowdsourcing
Han Yu, Chunyan Miao, Siyuan Liu, Zhengxiang Pan, N. Syahidah B. Khalid, Zhiqi Shen, Cyril Leung

Markov Argumentation Random Fields
Yuqing Tang, Nir Oren, Katia Sycara

Exhibits, Phoenix Convention Center, West Building, West Arcade 100 Level
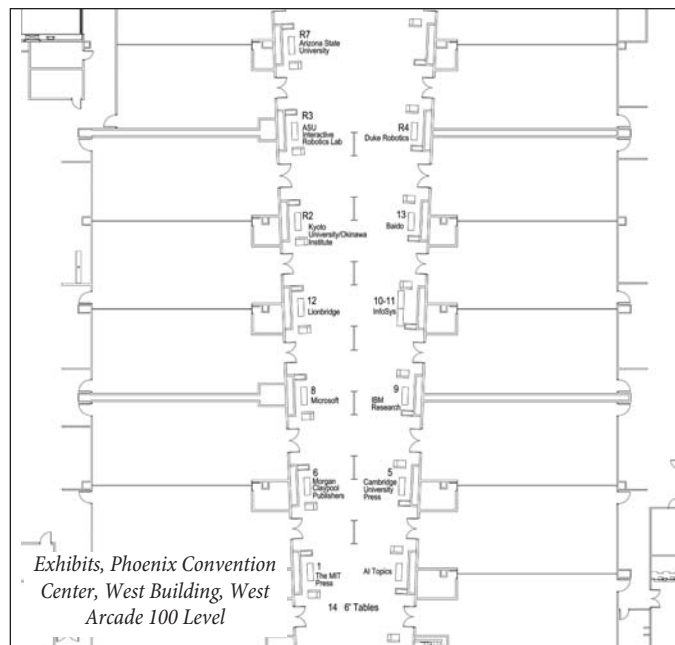
7:45-8:45

HYATT REGENCY PHOENIX, REMINGTONBC, 2ND LEVEL

Women's Mentoring Breakfast

8:50-9:50

WEST 301A, 3RD LEVEL

AAAI-16 Invited Talk:

Learning Treatment Policies in Mobile Health
Susan Murphy

9:50-10:00

Transition

10:00-11:00

WEST 101A, 1ST LEVEL

ML9: Transfer Learning I

Oral Presentations

Knowledge Transfer with Interactive Learning of Semantic Relationships
Jonghyun Choi, Sung Ju Hwang, Leonid Sigal, Larry S. Davis

Learning by Transferring from Unsupervised Universal Sources
Yu-Xiong Wang, Martial Hebert

A Probabilistic Approach to Knowledge Translation
Shangpu Jiang, Daniel Lowd, Dejing Dou

Poster Spotlight Talks

Instilling Social to Physical: Co-Regularized Heterogeneous Transfer Learning
Ying Wei, Yin Zhu, Cane Wing-ki Leung, Yangqiu Song, Qiang Yang

Transfer Learning for Cross-Language Text Categorization through Active Correspondences Construction
Joey Tianyi Zhou, Sinno Jialin Pan, Ivor W. Tsang, Shen-Shyang Ho

Cold-Start Heterogeneous-Device Wireless Localization
Vincent W. Zheng, Hong Cao, Shenghua Gao, Aditi Adhikari, Miao Lin, Kevin Chen-Chuan Chang

WEST 101B, 1ST LEVEL

ML10: Active Learning

Oral Presentations

Re-Active Learning: Active Learning with Re-labeling
Christopher H. Lin, Mausam, Daniel S. Weld

A POMDP Formulation of Proactive Learning
Kyle Hollins Wray, Shlomo Zilberstein

Multi-Domain Active Learning for Recommendation
Zihan Zhang, Xiaoming Jin, Lianghao Li, Guiguang Ding, Qiang Yang

Poster Spotlight Talks

Robustness of Bayesian Pool-Based Active Learning Against Prior Misspecification
Nguyen Viet Cuong, Nan Ye, Wee Sun Lee

Active Learning with Cross-Class Knowledge Transfer
Yuchen Guo, Guiguang Ding, Yuqi Wang, Xiaoming Jin

Noisy Submodular Maximization via Adaptive Sampling with Applications to Crowdsourced Image Collection Summarization
Adish Singla, Sebastian Tschiatschek, Andreas Krause

WEST 101C, 1ST LEVEL

KRR2: SAT and ASP

Oral Presentations

Boolean Functions with Ordered Domains in Answer Set Programming
Mario Alviano, Wolfgang Faber, Hannes Strass

Solving Goal Recognition Design Using ASP
Tran Cao Son, Orkunt Sabuncu, Christian Schulz-Hanke, Torsten Schaub, William Yeoh

SAT-to-SAT: Declarative Extension of SAT Solvers with New Propagators
Tomi Janhunen, Shahab Tasharrofi, Eugenia Ternovska

Poster Spotlight Talks

Component Caching in Hybrid Domains with Piecewise Polynomial Densities
Vaishak Belle, Guy Van den Broeck, Andrea Passerini

On the Containment of SPARQL Queries under Entailment Regimes
Melisachew Wudage Chekol

Query Answering with Inconsistent Existential Rules under Stable Model Semantics
Hai Wan, Heng Zhang, Peng Xiao, Haoran Huang, Yan Zhang

WEST 102A, 1ST LEVEL

NLP4: Relation Extraction

Oral Presentations

Aggregating Inter-Sentence Information to Enhance Relation Extraction
Hao Zheng, Zhoujun Li, Senzhang Wang, Zhao Yan, Jianshe Zhou

Improving Opinion Aspect Extraction Using Semantic Similarity and Aspect Associations
Qian Liu, Bing Liu, Yuanlin Zhang, Doo Soon Kim, Zhiqiang Gao

Numerical Relation Extraction with Minimal Supervision
Aman Madaan, Ashish Mittal, Mausam, Ganesh Ramakrishnan, Sunita Sarawagi

Poster Spotlight Talks

Distant IE by Bootstrapping Using Lists and Document Structure
Lidong Bing, Mingyang Ling, Richard C. Wang, William W. Cohen

A Joint Model for Entity Set Expansion and Attribute Extraction from Web Search Queries
Zhenzhong Zhang, Le Sun, Xianpei Han

Representing Verbs as Argument Concepts
Yu Gong, Kaiqi Zhao, Kenny Q. Zhu

WEST 102B, 1ST LEVEL

ML11: Time Series

Oral Presentations

Online ARIMA Algorithms for Time Series Prediction
Chenghao Liu, Steven C. H. Hoi, Peilin Zhao, Jianling Sun

Learning Continuous-Time Bayesian Networks in Relational Domains: A Non-Parametric Approach
Shuo Yang, Tushar Khot, Kristian Kersting, Sriraam Natarajan

Survival Prediction by an Integrated Learning Criterion on Intermittently Varying Healthcare Data
Jianfei Zhang, Lifei Chen, Alain Vanasse, Josiane Courteau, Shengrui Wang

Poster Spotlight Talks

Interaction Point Processes via Infinite Branching Model
Peng Lin, Bang Zhang, Ting Guo, Yang Wang, Fang Chen

Efficient Learning of Timeseries Shapelets
Lu Hou, James T. Kwok, Jacek M. Zurada

WEST 102C, 1ST LEVEL

GTEP4: Game Theoretic Equilibrium

Oral Presentations

From Duels to Battlefields: Computing Equilibria of Blotto and Other Games
AmirMahdi Ahmadinejad, Sina Dehghani, MohammadTaghi Hajiaghayi, Brendan Lucier, Hamid Mahini, Saeed Seddighin

Using Correlated Strategies for Computing Stackelberg Equilibria in Extensive-Form Games
Jiri Cermak, Branislav Bosansky, Karel Durkota, Viliam Lisy, Christopher Kiekintveld

Variations on the Hotelling-Downs Model
Michal Feldman, Amos Fiat, Svetlana Obraztsova

Poster Spotlight Talks

Refining Subgames in Large Imperfect Information Games
Martin Schmid, Matej Moravcik, Karel Ha, Milan Hladik, Stephen Gaukrodger

Sequence-Form and Evolutionary Dynamics: Realization Equivalence to Agent Form and Logit Dynamics
Nicola Gatti, Marcello Restelli

WEST 106A, 1ST LEVEL

APP3: Social Networks

Oral Presentations

DRIMUX: Dynamic Rumor Influence Minimization with User Experience in Social Networks
Biao Wang, Ge Chen, Luoyi Fu, Li Song, Xinbing Wang, Xue Liu

On the Minimum Differentially Resolving Set Problem for Diffusion Source Inference in Networks
Chuan Zhou, Wei-Xue Lu, Peng Zhang, Jia Wu, Yue Hu, Li Guo

Social Role-Aware Emotion Contagion in Image Social Networks
Yang Yang, Jia Jia, Boya Wu, Jie Tang

Poster Spotlight Talks

Temporal Vaccination Games Under Resource Constraints
Abhijin Adiga, Anil Vullikanti

Closeness Centrality for Networks with Overlapping Community Structure
Mateusz K. Tarkowski, Piotr Szczepanski, Talal Rahwan, Tomasz P. Michalak, Michael Wooldridge

Little Is Much: Bridging Cross-Platform Behaviors through Overlapped Crowds
Meng Jiang, Peng Cui, Nicholas Jing Yuan, Xing Xie, Shiqiang Yang

WEST 106B, 1ST LEVEL

Student Abstract Spotlights

The following subset of student abstracts has been selected for oral spotlight presentation. These finalists will be eligible for the best 3-minute presentation award.

A Comparison of Supervised Learning Algorithms for Telerobotic Control Using Electromyography Signals
Tyler M. Frasca, Antonio G. Sestito, Craig Versek, Douglas E. Dow, Barry C. Husowitz, Nate Derbinsky

SPAN: Understanding a Question with Its Support Answers
Liang Pang, Yanyan Lan, Jiafeng Guo, Jun Xu, Xueqi Cheng

Towards Structural Tractability in Hedonic Games
Dominik Peters

MIP-Nets: Enabling Information Sharing in Loosely-Coupled Teamwork
Ofra Amir, Barbara J. Grosz, Krzysztof Z. Gajos

Image Privacy Prediction Using Deep Features
Ashwini Tonge, Cornelia Caragea

Counter-Transitivity in Argument Ranking Semantics
Fuan Pu, Jian Luo, Guiming Luo

Bayesian AutoEncoder: Generation of Bayesian Networks with Hidden Nodes for Features
Kaneharu Nishino, Mary Inaba

Bayesian Markov Games with Explicit Finite-Level Types
Muthukumaran Chandrasekaran, Yingke Chen, Prashant Doshi

BRBA: A Blocking-Based Association Rule Hiding Method
Peng Cheng, Ivan Lee, Li Li, Kuo-Kun Tseng, Jeng-Shyang Pan

Epitomic Image Super-Resolution
Yingzhen Yang, Zhangyang Wang, Zhaowen Wang, Shiyu Chang, Ding Liu, Honghui Shi, Thomas S. Huang

Robust Execution Strategies for Probabilistic Temporal Planning
Sam Dietrich, Kyle Lund, James C. Boerkoel Jr.

Monte Carlo Tree Search for Multi-Robot Task Allocation
Bilal Kartal, Ernesto Nunes, Julio Godoy, Maria Gini

Heuristic Planning for Hybrid Systems
Wiktor Piotrowski, Maria Fox, Derek Long, Daniele Magazzeni, Fabio Mercorio

Mobility Sequence Extraction and Labeling Using Sparse Cell Phone Data
Yingxiang Yang, Peter Widhalm, Shounak Athavale, Marta C. González

Pseudo-Tree Construction Heuristics for DCOPs with Variable Communication Times
Atena M Tabakhi

WEST 106C, 1ST LEVEL

IAAI-16: Machine Learning/Data Mining II: Digital Libraries

Document Type Classification in Online Digital Libraries
Cornelia Caragea, Jian Wu, Sujatha Das Gollapalli, C. Lee Giles

MetaSeer.STEM:Towards Automating Meta-Analyses
Kishore Neppalli, Cornelia Caragea, Robin Mayes, Kim Nimon, Fred Oswald

11:00-11:30

Coffee Break

Monday, February 15 — 11:30 AM–2:00 PM

11:30-12:30

WEST 101A, 1ST LEVEL
ML12: Transfer Learning II

Oral Presentations

Multi-Stage Multi-Task Learning with Reduced Rank
Lei Han, Yu Zhang

Reuse of Neural Modules for General Video Game Playing
Elliot Meyerson, Alexander Braylan, Mark Hollenbeck, Risto Miikkulainen

Relational Knowledge Transfer for Zero-Shot Learning
Donghui Wang, Yanan Li, Yuetan Lin, Yueting Zhuang

Poster Spotlight Talks

Collective Noise Contrastive Estimation for Policy Transfer Learning
Weinan Zhang, Ulrich Paquet, Katja Hofmann

Domain-Constraint Transfer Coding for Imbalanced Unsupervised Domain Adaptation
Yao-Hung Hubert Tsai, Cheng-An Hou, Wei-Yu Chen, Yi-Ren Yeh, Yu-Chiang Frank Wang

Return of Frustratingly Easy Domain Adaptation
Baochen Sun, Jiashi Feng, Kate Saenko

WEST 101B, 1ST LEVEL
ML13: Temporal Pattern Recognition

Oral Presentations

Recognizing Complex Activities by a Probabilistic Interval-Based Model
Li Liu, Li Cheng, Ye Liu, Yongpo Jia, David S. Rosenblum

Efficient Spatio-Temporal Tactile Object Recognition with Randomized Tiling Convolutional Networks in a Hierarchical Fusion Strategy
Lele Cao, Ramamohanarao Kotagiri, Fuchun Sun, Hongbo Li, Wenbing Huang, Zay Maung Maung Aye

Convolution Kernels for Discriminative Learning from Streaming Text
Michal Lukasik, Trevor Cohn

Poster Spotlight Talks

Graph-without-Cut: An Ideal Graph Learning for Image Segmentation
Lianli Gao, Jingkuan Song, Feiping Nie, Fuhao Zou, Nicu Sebe, Heng Tao Shen

Path Following with Adaptive Path Estimation for Graph Matching
Tao Wang, Haibin Ling

Recognizing Actions in 3D Using Action-Snippets and Activated Simplices
Chunyu Wang, John Flynn, Yizhou Wang, Alan L. Yuille

WEST 101C, 1ST LEVEL
KRR3: Complexity and Description Logic

Oral Presentations

Explaining Inconsistency-Tolerant Query Answering over Description Logic Knowledge Bases
Meghyn Bienvenu, Camille Bourgaux, François Goasdoué

A Model for Learning Description Logic Ontologies Based on Exact Learning
Boris Konev, Ana Ozaki, Frank Wolter

Complexity Results and Algorithms for Extension Enforcement in Abstract Argumentation
Johannes P. Wallner, Andreas Niskanen, Matti Järvisalo

Poster Spotlight Talks

Beyond OWL 2 QL in OBDA: Rewritings and Approximations
Elena Botoeva, Diego Calvanese, Valerio Santarelli, Domenico F. Savo, Alessandro Solimando, Guohui Xiao

Basic Probabilistic Ontological Data Exchange with Existential Rules
Thomas Lukasiewicz, Maria Vanina Martinez, Livia Predoiu, Gerardo I. Simari

Using Decomposition-Parameters for QBF: Mind the Prefix!
Eduard Eiben, Robert Ganian, Sebastian Ordyniak

WEST 102A, 1ST LEVEL
NLP5: Semantics and Summarization

Oral Presentations

PEAK: Pyramid Evaluation via Automated Knowledge Extraction
Qian Yang, Rebecca J. Passonneau, Gerard de Melo

Inferring Interpersonal Relations in Narrative Summaries
Shashank Srivastava, Snigdha Chaturvedi, Tom Mitchell

Ask, and Shall You Receive?: Understanding Desire Fulfillment in Natural Language Text
Snigdha Chaturvedi, Dan Goldwasser, Hal Daumé III

Poster Spotlight Talks

TGSum: Build Tweet Guided Multi-Document Summarization Dataset
Ziqiang Cao, Chengyao Chen, Wenjie Li, Sujian Li, Furu Wei, Ming Zhou

Dependency Tree Representations of Predicate-Argument Structures
Likun Qiu, Yue Zhang, Meishan Zhang

Learning to Generate Poster Spotlight Talks of Scientific Papers
Yuting Qiang, Yanwei Fu, Yanwen Guo, Zhi-Hua Zhou, Leonid Sigal

WEST 102B, 1ST LEVEL
APP4: Privacy

Oral Presentations

On the Differential Privacy of Bayesian Inference
Zuhe Zhang, Benjamin I. P. Rubinstein, Christos Dimitrakakis

Differential Privacy Preservation for Deep Auto-Encoders: An Application of Human Behavior Prediction
NhatHai Phan, Yue Wang, Xintao Wu, Dejing Dou

Logical Foundations of Privacy-Preserving Publishing of Linked Data
Bernardo Cuenca Grau, Egor V. Kostylev

Poster Spotlight Talks

Privacy-CNH: A Framework to Detect Photo Privacy with Convolutional Neural Network Using Hierarchical Features
Lam Tran, Deguang Kong, Hongxia Jin, Ji Liu

Wishart Mechanism for Differentially Private Principal Components Analysis
Wuxuan Jiang, Cong Xie, Zhihua Zhang

WEST 102C, 1ST LEVEL
PS1: Planning

Oral Presentations

Towards Clause-Learning State Space Search: Learning to Recognize Dead-Ends
Marcel Steinmetz, Jörg Hoffmann

Efficient Macroscopic Urban Traffic Models for Reducing Congestion: A PDDL+ Planning Approach
Mauro Vallati, Daniele Magazzeni, Bart De Schutter, Lukas Chrpa, Thomas L. McCluskey

Tiebreaking Strategies for A* Search: How to Explore the Final Frontier
Masataro Asai, Alex Fukunaga

Poster Spotlight Talks

Bayesian Inference of Recursive Sequences of Group Activities from Tracks
Ernesto Brau, Colin Dawson, Alfredo Carrillo, David Sidi, Clayton T. Morrison

Approximation Algorithms for Route Planning with Nonlinear Objectives
Ger Yang, Evdokia Nikolova

General Error Bounds in Heuristic Search Algorithms for Stochastic Shortest Path Problems
Eric A. Hansen, Ibrahim Abdoulahi

WEST 106A, 1ST LEVEL
HAI1: Humans and AI

Oral Presentations

Intelligent Advice Provisioning for Repeated Interaction
Priel Levy, David Sarne

Instructable Intelligent Personal Agent
Amos Azaria, Jayant Krishnamurthy, Tom M. Mitchell

A Deep Choice Model
Makoto Otsuka, Takayuki Osogami

Poster Spotlight Talks

Personalized Alert Agent for Optimal User Performance
Avraham Shvartzon, Amos Azaria, Sarit Kraus, Claudia V. Goldman, Joachim Meyer, Omer Tsimhoni

Egocentric Video Search via Physical Interactions
Taiki Miyanishi, Jun-ichiro Hirayama, Quan Kong, Takuya Maekawa, Hiroki Moriya, Takayuki Suyama

WEST 106B, 1ST LEVEL
Senior Member Talks 1: Blue Sky Talks

Indefinite Scalability for Living Computation
David H. Ackley

Embedding Ethical Principles in Collective Decision Support Systems
Joshua Greene, Francesca Rossi, John Tasioulas, Kristen Brent Venable, Brian Williams

Five Dimensions of Reasoning in the Wild
Don Perlis

WEST 106C, 1ST LEVEL
IAAI-16: Application II: Autonomous Vehicle and Challenge Paper

An Autonomous Override System to Prevent Airborne Loss of Control
Sweewarman Balachandran, Ella M. Atkins

Challenge Problem Paper: Infusing Human Factors into Algorithmic Crowdsourcing
Han Yu, Chunyan Miao, Zhiqi Shen, Jun Lin, Cyril Leung, Qiang Yang

12:30-2:00
Lunch Break
(Lunch with a Fellow — offsite)

Monday, February 15 — 2:00 PM–3:30 PM

2:00-3:30

WEST 101A, 1ST LEVEL
ML14: Clustering

Oral Presentations

The Constrained Laplacian Rank Algorithm for Graph-Based Clustering
Feiping Nie, Xiaoqian Wang, Michael I. Jordan, Heng Huang

Multiple Kernel k-Means Clustering with Matrix-Induced Regularization
Xinwang Liu, Yong Dou, Jianping Yin, Lei Wang, En Zhu

The Hidden Convexity of Spectral Clustering
James Voss, Mikhail Belkin, Luis Rademacher

Maximum Margin Dirichlet Process Mixtures for Clustering
Gang Chen, Haiying Zhang, Caiming Xiong

Poster Spotlight Talks

Decentralized Robust Subspace Clustering
Bo Liu, Xiao-Tong Yuan, Yang Yu, Qingshan Liu, Dimitris N. Metaxas

Scalable Sequential Spectral Clustering
Yeqing Li, Junzhou Huang, Wei Liu

Approximate K-Means++ in Sublinear Time
Olivier Bachem, Mario Lucic, S. Hamed Hassani, Andreas Krause

On Order-Constrained Transitive Distance Clustering
Zhiding Yu, Weiyang Liu, Wenbo Liu, Yingzhen Yang, Ming Li, B. V. K. Vijaya Kumar

Reconstructing Hidden Permutations Using the Average-Precision (AP) Correlation Statistic
Lorenzo De Stefani, Alessandro Epasto, Eli Upfal, Fabio Vandin

Viral Clustering: A Robust Method to Extract Structures in Heterogeneous Datasets
Vahan Petrosyan, Alexandre Proutiere

Video Semantic Clustering with Sparse and Incomplete Tags
Jingya Wang, Xiatian Zhu, Shaogang Gong

Product Grassmann Manifold Representation and Its LRR Models
Boyue Wang, Yongli Hu, Junbin Gao, Yanfeng Sun, Baocai Yin

Infinite Plaid Models for Infinite Bi-Clustering
Katsuhiko Ishiguro, Issei Sato, Masahiro Nakano, Akisato Kimura, Naonori Ueda

WEST 101B, 1ST LEVEL
ML15: Deep Learning I

Oral Presentations

On the Depth of Deep Neural Networks: A Theoretical View
Shizhao Sun, Wei Chen, Liwei Wang, Xiaoguang Liu, Tie-Yan Liu

How Important Is Weight Symmetry in Backpropagation?
Qianli Liao, Joel Z. Leibo, Tomaso Poggio

Deep Learning with S-Shaped Rectified Linear Activation Units
Xiaojie Jin, Chunyu Xu, Jiashi Feng, Yunchao Wei, Junjun Xiong, Shuicheng Yan

Learning Step Size Controllers for Robust Neural Network Training
Christian Daniel, Jonathan Taylor, Sebastian Nowozin

Poster Spotlight Talks

Convolutional Neural Networks over Tree Structures for Programming Language Processing
Lili Mou, Ge Li, Lu Zhang, Tao Wang, Zhi Jin

Learning Deep l_0 Encoders
Zhangyang Wang, Qing Ling, Thomas S. Huang

Learning FRAME Models Using CNN Filters
Yang Lu, Song-Chun Zhu, Ying Nian Wu

Conservativeness of Untied Auto-Encoders
Daniel Jiwoong Im, Mohamed Ishmael Belghazi, Roland Memisevic

Adaptive Normalized Risk-Averting Training for Deep Neural Networks
Zhiguang Wang, Tim Oates, James Lo

High-Order Stochastic Gradient Thermostats for Bayesian Learning of Deep Models
Chunyuan Li, Changyou Chen, Kai Fan, Lawrence Carin

Deep Hashing Network for Efficient Similarity Retrieval
Han Zhu, Mingsheng Long, Jianmin Wang, Yue Cao

WEST 101C, 1ST LEVEL
KRR4: Time and Knowledge

Oral Presentations

A Semantical Analysis of Second-Order Propositional Modal Logic
Francesco Belardinelli, Wiebe van der Hoek

Qualitative Spatio-Temporal Stream Reasoning with Unobservable Intertemporal Spatial Relations Using Landmarks
Daniel de Leng, Fredrik Heintz

Dynamic Controllability of Disjunctive Temporal Networks: Validation and Synthesis of Executable Strategies
Alessandro Cimatti, Andrea Micheli, Marco Roveri

'Knowing Whether' in Proper Epistemic Knowledge Bases
Tim Miller, Paolo Felli, Christian Muise, Adrian Pearce, Liz Sonenberg

Poster Spotlight Talks

A First-Order Logic of Probability and Only Knowing in Unbounded Domains
Vaishak Belle, Gerhard Lakemeyer, Hector J. Levesque

Complementing Semantic Roles with Temporally-Anchored Spatial Knowledge: Crowdsourced Annotations and Experiments
Alakananda Vempala, Eduardo Blanco

WEST 102A, 1ST LEVEL
NLP6: Discourse and Question Answering

Oral Presentations

Implicit Discourse Relation Classification via Multi-Task Neural Networks
Yang Liu, Sujian Li, Xiaodong Zhang, Zhifang Sui

A Unified Bayesian Model of Scripts, Frames and Language
Francis Ferraro, Benjamin Van Durme

QART: A System for Real-Time Holistic Quality Assurance for Contact Center Dialogues
Shourya Roy, Ragunathan Mariappan, Sandipan Dandapat, Saurabh Srivastava, Sainyam Galhotra, Balaji Peddamuthu

Learning Statistical Scripts with LSTM Recurrent Neural Networks
Karl Pichotta, Raymond J. Mooney

Poster Spotlight Talks

Building End-To-End Dialogue Systems Using Generative Hierarchical Neural Network Models
Iulian Vlad Serban, Alessandro Sordoni, Yoshua Bengio, Aaron Courville, Joelle Pineau

A Joint Model for Question Answering over Multiple Knowledge Bases
Yuanzhe Zhang, Shizhu He, Kang Liu, Jun Zhao

Combining Retrieval, Statistics, and Inference to Answer Elementary Science Questions
Peter Clark, Oren Etzioni, Tushar Khot, Ashish Sabharwal, Oyvind Tafjord, Peter Turney, Daniel Khashabi

An Oral Exam for Measuring a Dialog System's Capabilities
David Cohen, Ian Lane

Evaluation of Semantic Dependency Labeling Across Domains
Svetlana Stoyanchev, Amanda Stent, Srinivas Bangalore

Discourse Relations Detection via a Mixed Generative-Discriminative Framework
Jifan Chen, Qi Zhang, Pengfei Liu, Xuanjing Huang

Joint Inference over a Lightly Supervised Information Extraction Pipeline: Towards Event Coreference Resolution for Resource-Scarce Languages
Chen Chen, Vincent Ng

Community-Based Question Answering via Heterogeneous Social Network Learning
Hanyin Fang, Fei Wu, Zhou Zhao, Xinyu Duan, Yueting Zhuang, Martin Ester

Topic Concentration in Query Focused Summarization Datasets
Tal Baumel, Raphael Cohen, Michael Elhadad

WEST 102B, 1ST LEVEL
ML16: Probability Models

Oral Presentations

Progressive EM for Latent Tree Models and Hierarchical Topic Detection
Peixian Chen, Nevin L. Zhang, Leonard K. M. Poon, Zhourong Chen

Random Mixed Field Model for Mixed-Attribute Data Restoration
Qiang Li, Wei Bian, Richard Yi Da Xu, Jane You, Dacheng Tao

Learning Tractable Probabilistic Models for Fault Localization
Aniruddh Nath, Pedro Domingos

Structured Features in Naive Bayes Classification
Arthur Choi, Nazgol Tavabi, Adnan Darwiche

Poster Spotlight Talks

Extending the Modelling Capacity of Gaussian Conditional Random Fields while Learning Faster
Jesse Glass, Mohamed Ghalwash, Milan Vukicevic, Zoran Obradovic

Near-Optimal Active Learning of Multi-Output Gaussian Processes
Yehong Zhang, Trong Nghia Hoang, Kian Hsiang Low, Mohan Kankanhalli

DinTucker: Scaling Up Gaussian Process Models on Large Multidimensional Arrays
Shandian Zhe, Yuan Qi, Youngja Park, Zenglin Xu, Ian Molloy, Suresh Chari

On Parameter Tying by Quantization
Li Chou, Somdeb Sarkhel, Nicholas Ruozzi, Vibhav Gogate

Flattening the Density Gradient for Eliminating Spatial Centrality to Reduce Hubness
Kazuo Hara, Ikumi Suzuki, Kei Kobayashi, Kenji Fukumizu, Milos Radovanovic

Learning Future Classifiers without Additional Data
Atsutoshi Kumagai, Tomoharu Iwata

WEST 102C, 1ST LEVEL
GTEP5: Game Theory

Oral Presentations

Price of Pareto Optimality in Hedonic Games
Edith Elkind, Angelo Fanelli, Michele Flammini

Graphical Hedonic Games of Bounded Treewidth
Dominik Peters

Blind, Greedy, and Random: Algorithms for Matching and Clustering Using Only Ordinal Information
Elliot Anshelevich, Shreyas Sekar

Using the Shapley Value to Analyze Algorithm Portfolios
Alexandre Fréchette, Lars Kotthoff, Tomasz Michalak, Talal Rahwan, Holger H. Hoos, Kevin Leyton-Brown

Poster Spotlight Talks

Complexity of Hedonic Games with Dichotomous Preferences
Dominik Peters

Strategy-Based Warm Starting for Regret Minimization in Games
Noam Brown, Tuomas Sandholm

Computing Rational Decisions In Extensive Games with Limited Foresight
Paolo Turrini

Counterfactual Regret Minimization in Sequential Security Games
Viliam Lisy, Trevor Davis, Michael Bowling

A Security Game Combining Patrolling and Alarm-Triggered Responses Under Spatial and Detection Uncertainties
Nicola Basilico, Giuseppe De Nittis, Nicola Gatti

Factorization Ranking Model for Move Prediction in the Game of Go
Chenjun Xiao, Martin Müller

Nested Monte Carlo Search for Two-Player Games
Tristan Cazenave, Abdallah Saffidine, Michael Schofield, Michael Thielscher

WEST 106A, 1ST LEVEL
COG1: Cognitive Systems

Oral Presentations

MIDCA: A Metacognitive, Integrated Dual-Cycle Architecture for Self-Regulated Autonomy
Michael T. Cox, Zohreh Alavi, Dustin Dannenhauer, Vahid Eyorokon, Hector Munoz-Avila, Don Perlis

Commonsense Interpretation of Triangle Behavior
Andrew S. Gordon

Surprise-Triggered Reformulation of Design Goals
Kazjon Grace, Mary Lou Maher

Visual Learning of Arithmetic Operation
Yedid Hoshen, Shmuel Peleg

Poster Spotlight Talks

Predicting Readers' Sarcasm Understandability by Modeling Gaze Behavior
Abhijit Mishra, Diptesh Kanojia, Pushpak Bhattacharyya

Using Multiple Representations to Simultaneously Learn Computational Thinking and Middle School Science
Satabdi Basu, Gautam Biswas, John Kinnebrew

Modeling Human Ad Hoc Coordination
Peter M. Krafft, Chris L. Baker, Alex "Sandy" Pentland, Joshua B. Tenenbaum

Modeling Human Understanding of Complex Intentional Action with a Bayesian Nonparametric Subgoal Model
Ryo Nakahashi, Chris L. Baker, Joshua B. Tenenbaum

WEST 106B, 1ST LEVEL
ROB3: RSS Invited, Robotics Fellowship

RSS Invited Talks

Two-Step Focused Inference for Resource-Constrained Collision-Free Navigation
Beipeng Mu, Ali-akbar Agha-mohammadi, Liam Paull, Matthew Graham, Jonathan How, John Leonard

Long-Horizon Robotic Search and Classification Using Sampling-Based Motion Planning
Geoff Hollinger

rCRF: Recursive Belief Estimation over CRFs in RGB-D Activity Videos
Ozan Sener, Ashutosh Saxena

Robotics Fellowship Talks

Robotic Nurse in the Operating Room: Conciliating Time with Intention
Tian Zhou

Autonomous Exploration Using UAVs
Sai Vemprala

Knowledge-Enabled Reasoning for Compliant Robotic Manipulation
Daniel Leidner

Object Contact Recognition and Localization by Employing Tactile Patterns, Kinaesthetic Cues and Visual Maps
Shan Luo

WEST 106C, 1ST LEVEL
(2:00-3:05)
IAAI-16: Machine Learning/Data Mining III: Healthcare

Automated Volumetric Intravascular Plaque Classification Using Optical Coherence Tomography (OCT)
Ronny Shalev, Daisuke Nakamura, Setsu Nishino, Andrew M. Rollins, Hiram G. Bezerra, David L. Wilson, Soumya Ray

Deployed: Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media
Adam Sadilek, Henry Kautz, Lauren DiPrete, Brian Labus, Eric Portman, Jack Teitel, Vincent Silenzio

3:30-4:00
Coffee Break

4:00-5:00

WEST 301A, 3RD LEVEL

AAAI-16 Invited Talk:

What We Should Think about Regarding the Future of Machine Intelligence
Nick Bostrom

5:10-6:10

WEST 301A, 3RD LEVEL

AAAI-16 Invited Panel:

AI's Impact on Labor Markets
Panelists: Nick Bostrom, Erik Brynjolfsoon, Oren Etzioni, Moshe Vardi. Moderator: Toby Walsh

101ABC, 1ST LEVEL

IAAI-16 Robert S. Engelmore Memorial Award Lecture:

A Quarter Century of AI Applications: What We Knew Then versus What We Know Now
Reid G. Smith (i2k Connect)

6:00-6:30

WEST 301A, 3RD LEVEL

Video Competition Awards

6:30–8:30

WEST 301BC, 3RD LEVEL

AAAI-16 Poster / Demo Reception 2

All technical spotlight papers presented earlier today will be presented in poster format, as well Student Abstract posters. (A complete list of student abstracts is included in poster flyer.) The following demos will also be presented this evening:

Predicting Personal Traits from Facial Images Using Convolutional Neural Networks Augmented with Facial Landmark Information
Yoad Lewenberg, Yoram Bachrach, Sukrit Shankar, Antonio Criminisi

EKNOT: Event Knowledge from News and Opinions in Twitter
Min Li, Jingjing Wang, Wenzhu Tong, Hongkun Yu, Xiuli Ma, Yucheng Chen, Haoyan Cai, Jiawei Han

BBookX: Building Online Open Books for Personalized Learning
Chen Liang, Shuting Wang, Zhaohui Wu, Kyle Williams, Bart Pursel, Benjamin Brautigam, Sherwyn Saul, Hannah Williams, Kyle Bowen, C. Lee Giles

Moodee: An Intelligent Mobile Companion for Sensing Your Stress from Social Media Postings
Huijie Lin, Jia Jia, Jie Huang, Enze Zhou, Jingtian Fu, Yejun Liu, Huanbo Luan

An Image Analysis Environment for Species Identification of Food Contaminating Beetles
Daniel Martin, Hongjian Ding, Leihong Wu, Howard Semey, Amy Barnes, Darryl Langley, Su Inn Park, Zhichao Liu, Weida Tong, Joshua Xu

WWDS APIs: Application Programming Interfaces for Efficient Manipulation of World WordNet Database Structure
Hanumant Redkar, Sudha Bhingardive, Kevin Patel, Pushpak Bhattacharyya, Neha Prabhugaonkar, Apurva Nagvenkar, Ramdas Karmali

Artificial Swarm Intelligence, a Human-in-the-loop approach to A.I.
Louis Rosenberg

Toward Interactive Relational Learning
Ryan Rossi, Rong Zhou

EDDIE: An Embodied AI System for Research and Intervention for Individuals with ASD
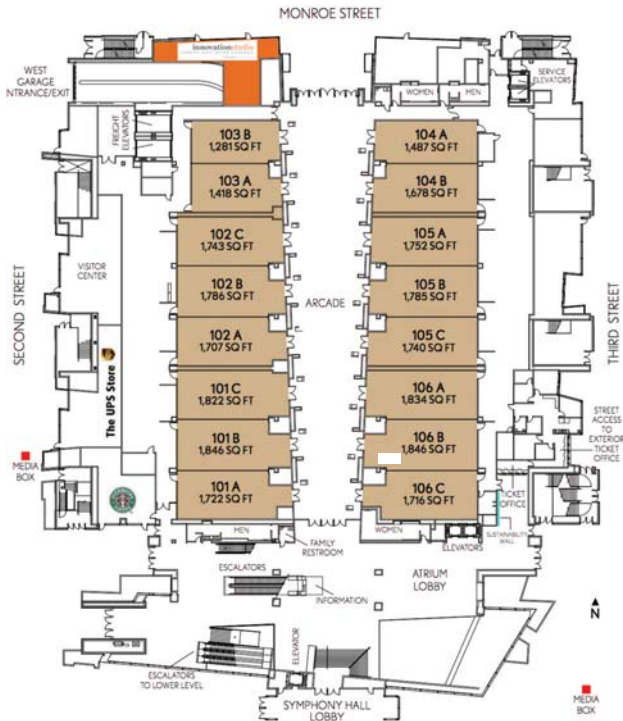*Robert Selkowitz, Jonathan Rodgers, P.J. Moskal, Jon Mrowczynski, Christine Colson*

A Tool to Graphically Edit CP-nets
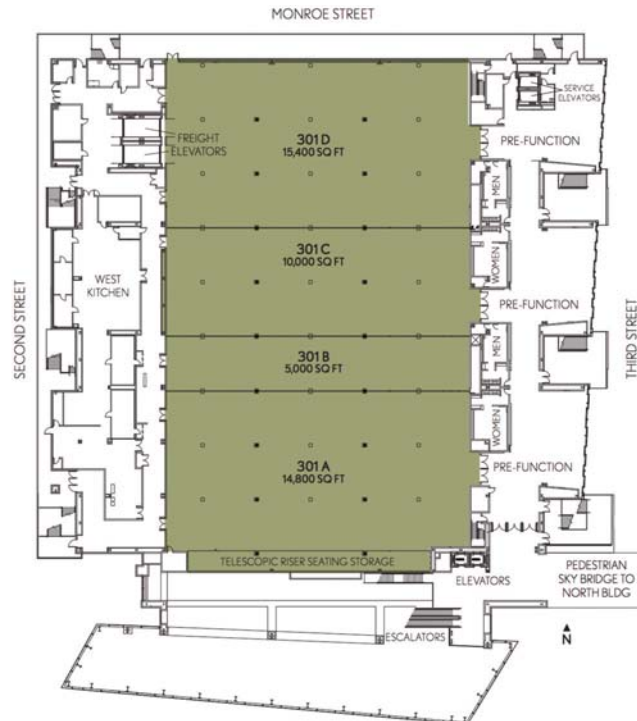*Aidan Shafran, Sam Saarinen, Judy Goldsmith*

WEST 106, 1ST LEVEL

8:00-10:00

AAAI-16 Games Night

Phoenix Convention Center, West Building Meeting Rooms, 100 Level

Phoenix Convention Center, West Building, West Ballroom, 300 Level

Tuesday, February 16 — 8:30 AM–2:00 PM

8:30-9:50

WEST 301A, 3RD LEVEL

8:30-8:50

AAAI-16 Conference Awards / Allen AI Science Challenge Award

8:50–9:50

IAAI-16 / AAAI-16 Joint Invited Talk:

Toward Artificial General Intelligence
Demis Hassabis

9:50–10:00
Transition

10:00-11:00

WEST 101A, 1ST LEVEL

APP5: Biomedical Applications I (focus on Deep Learning)

Oral Presentations

MUST-CNN: A Multilayer Shift-and-Stitch Deep Convolutional Architecture for Sequence-Based Protein Structure Prediction
Zeming Lin, Jack Lanchantin, Yanjun Qi

Deep Contextual Networks for Neuronal Structure Segmentation
Hao Chen, Xiaojuan Qi, Jie-Zhi Cheng, Pheng-Ann Heng

Mitosis Detection in Breast Cancer Histology Images via Deep Cascaded Networks
Hao Chen, Qi Dou, Xi Wang, Jing Qin, Pheng-Ann Heng

Poster Spotlight Talks

Learning Deep Convolutional Neural Networks for X-Ray Protein Crystallization Image Analysis
Margot Lisa-Jing Yann, Yichuan Tang

An Efficient Time Series Subsequence Pattern Mining and Prediction Framework with an Application to Respiratory Motion Prediction
Shouyi Wang, Kin Ming Kam, Cao Xiao, Stephen Bowen, W. Chaovalitwongse

Seeing the Unseen Network: Inferring Hidden Social Ties from Respondent-Driven Sampling
Lin Chen, Forrest W. Crawford, Amin Karbasi

WEST 101B, 1ST LEVEL

ML17: Bayesian Learning

Oral Presentations

Assumed Density Filtering Methods for Learning Bayesian Neural Networks
Soumya Ghosh, Francesco Maria Delle Fave, Jonathan Yedidia

Preconditioned Stochastic Gradient Langevin Dynamics for Deep Neural Networks
Chunyuan Li, Changyou Chen, David Carlson, Lawrence Carin

Closed-Form Gibbs Sampling for Graphical Models with Algebraic Constraints
Hadi Mohasel Afshar, Scott Sanner, Christfried Webers

Poster Spotlight Talks

Discriminative Nonparametric Latent Feature Relational Models with Data Augmentation
Bei Chen, Ning Chen, Jun Zhu, Jiaming Song, Bo Zhang

The Ostomachion Process
Xuhui Fan, Bin Li, Yi Wang, Yang Wang, Fang Chen

Marginalized Continuous Time Bayesian Networks for Network Reconstruction from Incomplete Observations
Lukas Studer, Loïc Paulevé, Christoph Zechner, Matthias Reumann, María Rodríguez Martínez, Heinz Koeppl

WEST 101C, 1ST LEVEL

Search4: Search and Constraint Satisfaction

Oral Presentations

Increasing Nogoods in Restart-Based Search
Jimmy H. M. Lee, Christian Schulte, Zichen Zhu

On the Extraction of One Maximal Information Subset That Does Not Conflict with Multiple Contexts
Éric Grégoire, Yacine Izza, Jean-Marie Lagniez

Solving the Station Repacking Problem
Alexandre Fréchette, Neil Newman, Kevin Leyton-Brown

Poster Spotlight Talks

Local Search for Hard SAT Formulas: The Strength of the Polynomial Law
Sixue Liu, Periklis A. Papakonstantinou

Exponential Recency Weighted Average Branching Heuristic for SAT Solvers
Jia Hui Liang, Vijay Ganesh, Pascal Poupart, Krzysztof Czarnecki

Abstract Zobrist Hashing: An Efficient Work Distribution Method for Parallel Best-First Search
Yuu Jinnai, Alex Fukunaga

WEST 102A, 1ST LEVEL

VIS4: Text and Vision

Oral Presentations

SentiCap: Generating Image Descriptions with Sentiments
Alexander Patrick Mathews, Lexing Xie, Xuming He

Reading Scene Text in Deep Convolutional Sequences
Pan He, Weilin Huang, Yu Qiao, Chen Change Loy, Xiaoou Tang

Creating Images by Learning Image Semantics Using Vector Space Models
Derrall Heath, Dan Ventura

Poster Spotlight Talks

Towards Domain Adaptive Vehicle Detection in Satellite Image by Supervised Super-Resolution Transfer
Liujuan Cao, Rongrong Ji, Cheng Wang, Jonathan Li

Transductive Zero-Shot Recognition via Shared Model Space Learning
Yuchen Guo, Guiguang Ding, Xiaoming Jin, Jianmin Wang

Exploiting View-Specific Appearance Similarities Across Classes for Zero-Shot Pose Prediction: A Metric Learning Approach
Alina Kuznetsova, Sung Ju Hwang, Bodo Rosenhahn, Leonid Sigal

WEST 102B, 1ST LEVEL

NLP7: Topic Flow

Oral Presentations

Topical Analysis of Interactions between News and Social Media
Ting Hua, Yue Ning, Feng Chen, Chang-Tien Lu, Naren Ramakrishnan

Tracking Idea Flows between Social Groups
Yangxin Zhong, Shixia Liu, Xiting Wang, Jiannan Xiao, Yangqiu Song

Modeling Evolving Relationships between Characters in Literary Novels
Snigdha Chaturvedi, Shashank Srivastava, Hal Daumé III, Chris Dyer

Poster Spotlight Talks

Identifying Search Keywords for Finding Relevant Social Media Posts
Shuai Wang, Zhiyuan Chen, Bing Liu, Sherry Emery

MOOCs Meet Measurement Theory: A Topic-Modelling Approach
Jiazhen He, Benjamin I. P. Rubinstein, James Bailey, Rui Zhang, Sandra Milligan, Jeffrey Chan

Temporal Topic Analysis with Endogenous and Exogenous Processes
Baiyang Wang, Diego Klabjan

WEST 102C, 1ST LEVEL

MAS2: Agent-Based Simulation and Multiagent Planning

Oral Presentations

Efficient Computation of Emergent Equilibrium in Agent-Based Simulation
Zehong Hu, Meng Sha, Moath Jarrah, Jie Zhang, Hui Xi

Emergence of Social Punishment and Cooperation through Prior Commitments
The Anh Han

Implicit Coordination in Crowded Multi-Agent Navigation
Julio Godoy, Ioannis Karamouzas, Stephen J. Guy, Maria Gini

Poster Spotlight Talks

Online Spatio-Temporal Matching in Stochastic and Dynamic Domains
Meghna Lowalekar, Pradeep Varakantham, Patrick Jaillet

Finding One's Best Crowd: Online Learning by Exploiting Source Similarity
Yang Liu, Mingyan Liu

Submodular Optimization with Routing Constraints
Haifeng Zhang, Yevgeniy Vorobeychik

WEST 106A, 1ST LEVEL

AIW4: Information Retrieval

Oral Presentations

Indexable Probabilistic Matrix Factorization for Maximum Inner Product Search
Marco Fraccaro, Ulrich Paquet, Ole Winther

Affinity Preserving Quantization for Hashing: A Vector Quantization Approach to Learning Compact Binary Codes
Zhe Wang, Ling-Yu Duan, Tiejun Huang, Wen Gao

Learning Cross-Domain Neural Networks for Sketch-Based 3D Shape Retrieval
Fan Zhu, Jin Xie, Yi Fang

Poster Spotlight Talks

Improving Recommendation of Tail Tags for Questions in Community Question Answering
Yu Wu, Wei Wu, Xiang Zhang, Zhoujun Li, Ming Zhou

Linear Submodular Bandits with a Knapsack Constraint
Baosheng Yu, Meng Fang, Dacheng Tao

Scientific Ranking over Heterogeneous Academic Hypernetwork
Ronghua Liang, Xiaorui Jiang

WEST 106C, 1ST LEVEL

IAAI-16: Cyber Security and Ontology I: Manufacturing

Data Driven Game Theoretic Cyber Threat Mitigation
John Robertson, Vivin Paliath, Jana Shakarian, Amanda Thart, Paulo Shakarian

Automated Capture and Execution of Manufacturability Rules Using Inductive Logic Programming
Abha Moitra, Ravi Palla, Arvind Rangarajan

11:00-11:30
Coffee Break

Tuesday, February 16 — 11:30 PM–2:00 PM

11:30-12:30

WEST 101A, 1ST LEVEL

APP6: Biomedical Applications II

Oral Presentations

Extracting Biomolecular Interactions Using Semantic Parsing of Biomedical Text
Sahil Garg, Aram Galstyan, Ulf Hermjakob, Daniel Marcu

Extracting Topical Phrases from Clinical Documents
Yulan He

Learning Adaptive Forecasting Models from Irregularly Sampled Multivariate Clinical Data
Zitao Liu, Milos Hauskrecht

Poster Spotlight Talks

Drosophila Gene Expression Pattern Annotation via Multi-Instance Biological Relevance Learning
Hua Wang, Cheng Deng, Hao Zhang, Xinbo Gao, Heng Huang

Predicting ICU Mortality Risk by Grouping Temporal Trends from a Multivariate Panel of Physiologic Measurements
Yuan Luo, Yu Xin, Rohit Joshi, Leo Celi, Peter Szolovits

Learning a Hybrid Architecture for Sequence Regression and Annotation
Yizhe Zhang, Ricardo Henao, Lawrence Carin, Jianling Zhong, Alexander J. Hartemink

WEST 101B, 1ST LEVEL

ML18: Learning under Noise

Oral Presentations

Noise-Adaptive Margin-Based Active Learning and Lower Bounds under Tsybakov Noise Condition
Yining Wang, Aarti Singh

Risk Minimization in the Presence of Label Noise
Wei Gao, Lu Wang, Yu-Feng Li, Zhi-Hua Zhou

Learning with Marginalized Corrupted Features and Labels Together
Yingming Li, Ming Yang, Zenglin Xu, Zhongfei (Mark) Zhang

Poster Spotlight Talks

Fast and Accurate Refined Nyström Based Kernel SVM
Zhe Li, Tianbao Yang, Lijun Zhang, Rong Jin

Linear-Time Learning on Distributions with Approximate Kernel Embeddings
Dougal J. Sutherland, Junier B. Oliva, Barnabás Póczos, Jeff Schneider

Common and Discriminative Subspace Kernel-Based Multiblock Tensor Partial Least Squares Regression
Ming Hou, Qibin Zhao, Brahim Chaib-draa, Andrzej Cichocki

WEST 101C, 1ST LEVEL

PS2: Partial Observability

Oral Presentations

Solving Risk-Sensitive POMDPs with and without Cost Observations
Ping Hou, William Yeoh, Pradeep Varakantham

RAO*: An Algorithm for Chance-Constrained POMDP's
Pedro Santana, Sylvie Thiébaux, Brian Williams

Computing Contingent Plans Using Online Replanning
Guy Shani, Radimir Komarnitsky

Poster Spotlight Talks

Goal Recognition Design with Non-Observable Actions
Sarah Keren, Avigdor Gal, Erez Karpas

A Symbolic SAT-Based Algorithm for Almost-Sure Reachability with Small Strategies in POMDPs
Krishnendu Chatterjee, Martin Chmelík, Jessica Davies

Learning for Decentralized Control of Multiagent Systems in Large, Partially-Observable Stochastic Environments
Miao Liu, Christopher Amato, Emily P. Anesta, J. Daniel Griffith, Jonathan P. How

WEST 102A, 1ST LEVEL

VIS5: Visual Intepretation

Oral Presentations

Metric Embedded Discriminative Vocabulary Learning for High-Level Person Representation
Yang Yang, Zhen Lei, Shifeng Zhang, Hailin Shi, Stan Z. Li

Learning to Appreciate the Aesthetic Effects of Clothing
Jia Jia, Jie Huang, Guangyao Shen, Tao He, Zhiyuan Liu, Huanbo Luan, Chao Yan

Toward a Taxonomy and Computational Models of Abnormalities in Images
Babak Saleh, Ahmed Elgammal, Jacob Feldman, Ali Farhadi

Poster Spotlight Talks

Co-Occurrence Feature Learning for Skeleton Based Action Recognition Using Regularized Deep LSTM Networks
Wentao Zhu, Cuiling Lan, Junliang Xing, Wenjun Zeng, Yanghao Li, Li Shen, Xiaohui Xie

Towards Optimal Binary Code Learning via Ordinal Embedding
Hong Liu, Rongrong Ji, Yongjian Wu, Wei Liu

WEST 102B, 1ST LEVEL

NLP8: Learning Representations for Language

Oral Presentations

ExTaSem! Extending, Taxonomizing and Semantifying Domain Terminologies
Luis Espinosa-Anke, Horacio Saggion, Francesco Ronzano, Roberto Navigli

A Representation Learning Framework for Multi-Source Transfer Parsing
Jiang Guo, Wanxiang Che, David Yarowsky, Haifeng Wang, Ting Liu

Addressing a Question Answering Challenge by Combining Statistical Methods with Inductive Rule Learning and Reasoning
Arindam Mitra, Chitta Baral

WEST 102C, 1ST LEVEL

Search5: Optimization II

Oral Presentations

Learning to Branch in Mixed Integer Programming
Elias B. Khalil, Pierre Le Bodic, Le Song, George Nemhauser, Bistra Dilkina

The Complexity Landscape of Decompositional Parameters for ILP
Robert Ganian, Sebastian Ordyniak

Exact Sampling with Integer Linear Programs and Random Perturbations
Carolyn Kim, Ashish Sabharwal, Stefano Ermon

Poster Spotlight Talks

Fast Nonsmooth Regularized Risk Minimization with Continuation
Shuai Zheng, Ruiliang Zhang, James T. Kwok

Linearized Alternating Direction Method with Penalization for Nonconvex and Nonsmooth Optimization
Yiyang Wang, Risheng Liu, Xiaoliang Song, Zhixun Su

Delay-Tolerant Online Convex Optimization: Unified Analysis and Adaptive-Gradient Algorithms
Pooria Joulani, András György, Csaba Szepesvári

WEST 106A, 1ST LEVEL

CSUST1: Sustainability: Energy, Nature and Climate

Oral Presentations

Energy- and Cost-Efficient Pumping Station Control
Timon V. Kanters, Frans A. Oliehoek, Michael Kaisers, Stan R. van den Bosch, Joep Grispen, Jeroen Hermans

Preventing Illegal Logging: Simultaneous Optimization of Resource Teams and Tactics for Security
Sara Mc Carthy, Milind Tambe, Christopher Kiekintveld, Meredith L. Gore, Alex Killion

Multi-Instance Multi-Label Class Discovery: A Computational Approach for Assessing Bird Biodiversity
Forrest Briggs, Xiaoli Z. Fern, Raviv Raich, Matthew Betts

Poster Spotlight Talks

Big-Data Mechanisms and Energy-Policy Design
Ankit Pat, Kate Larson, Srinivasen Keshav

An Axiomatic Framework for Ex-Ante Dynamic Pricing Mechanisms in Smart Grid
Sambaran Bandyopadhyay, Ramasuri Narayanam, Pratyush Kumar, Sarvapali Ramchurn, Vijay Arya, Iskandarbin Petra

WEST 106B, 1ST LEVEL

What's Hot Talks 2

ICCV 2015
Greg Hager

ICRA 2015
Nancy Amato

Angry Birds as a Challenge for Artificial Intelligence
Jochen Renz, XiaoYu Ge Rohan Verma, Peng Zhang

WEST 106C, 1ST LEVEL

IAAI-16: Ontology II: Automotive

Deployed: Ontology Re-Engineering: A Case Study from the Automotive Industry
Nestor Rychtyckyj, Venkatesh Raman, Baskaran Sankaranarayanan, P Sreenivasa Kumar, Deepak Khemani

12:30-2:00

Lunch Break
(Lunch with a Fellow — offsite)

Tuesday, February 16 — 2:00 PM–4:00 PM

2:00-3:30

WEST 101A, 1ST LEVEL

ML19: Reinforcement Learning I

Oral Presentations

Efficient Average Reward Reinforcement Learning Using Constant Shifting Values
Shangdong Yang, Yang Gao, Bo An, Hao Wang, Xingguo Chen

Distance Minimization for Reward Learning from Scored Trajectories
Benjamin Burchfiel, Carlo Tomasi, Ronald Parr

Compressed Conditional Mean Embeddings for Model-Based Reinforcement Learning
Guy Lever, John Shawe-Taylor, Ronnie Stafford, Csaba Szepesvári

Inverse Reinforcement Learning through Policy Gradient Minimization
Matteo Pirotta, Marcello Restelli

Poster Spotlight Talks

Algorithms for Differentially Private Multi-Armed Bandits
Aristide C. Y. Tossou, Christos Dimitrakakis

Efficient PAC-Optimal Exploration in Concurrent, Continuous State MDPs with Delayed Updates
Jason Pazis, Ronald Parr

Bounded Optimal Exploration in MDP
Kenji Kawaguchi

Sparse Latent Space Policy Search
Kevin Sebastian Luck, Joni Pajarinen, Erik Berger, Ville Kyrki, Heni Ben Amor

Improving Predictive State Representations via Gradient Descent
Nan Jiang, Alex Kulesza, Satinder Singh

Reinforcement Learning with Parameterized Actions
Warwick Masson, Pravesh Ranchod, George Konidaris

Incremental Stochastic Factorization for Online Reinforcement Learning
Andre M. S. Barreto, Rafael L. Beirigo, Joelle Pineau, Doina Precup

Gaussian Process Planning with Lipschitz Continuous Reward Functions: Towards Unifying Bayesian Optimization, Active Learning, and Beyond
Chun Kai Ling, Kian Hsiang Low, Patrick Jaillet

WEST 101B, 1ST LEVEL

ML20: Deep Learning II (NLP)

Oral Presentations

Shakeout: A New Regularized Deep Neural Network Training Scheme
Guoliang Kang, Jun Li, Dacheng Tao

Toward a Better Understanding of Deep Neural Network Based Acoustic Modelling: An Empirical Investigation
Xingfu Wang, Lin Wang, Jing Chen, Litao Wu

Character-Aware Neural Language Models
Yoon Kim, Yacine Jernite, David Sontag, Alexander M. Rush

Learning to Answer Questions from Image Using Convolutional Neural Network
Lin Ma, Zhengdong Lu, Hang Li

Poster Spotlight Talks

What Happens Next? Event Prediction Using a Compositional Neural Network Model
Mark Granroth-Wilding, Stephen Clark

A Deep Architecture for Semantic Matching with Multiple Positional Sentence Representations
Shengxian Wan, Yanyan Lan, Jiafeng Guo, Jun Xu, Liang Pang, Xueqi Cheng

Morphological Segmentation with Window LSTM Neural Networks
Linlin Wang, Zhu Cao, Yu Xia, Gerard de Melo

Siamese Recurrent Architectures for Learning Sentence Similarity
Jonas Mueller, Aditya Thyagarajan

A Morphology-Aware Network for Morphological Disambiguation
Eray Yildiz, Caglar Tirkaz, H. Bahadir Sahin, Mustafa Tolga Eren, Omer Ozan Sonmez

All-in Text: Learning Document, Label, and Word Representations Jointly
Jinseok Nam, Eneldo Loza Mencía, Johannes Fürnkranz

Joint Word Representation Learning Using a Corpus and a Semantic Lexicon
Danushka Bollegala, Alsuhaibani Mohammed, Takanori Maehara, Ken-ichi Kawarabayashi

WEST 101C, 1ST LEVEL
ML21: Learning, Teaching, and Evaluating

Oral Presentations

Multi-Objective Self-Paced Learning
Hao Li, Maoguo Gong, Deyu Meng, Qiguang Miao

Selecting Near-Optimal Learners via Incremental Data Allocation
Ashish Sabharwal, Horst Samulowitz, Gerald Tesauro

Exploiting an Oracle That Reports AUC Scores in Machine Learning Contests
Jacob Whitehill

Teaching-to-Learn and Learning-to-Teach for Multi-Label Propagation
Chen Gong, Dacheng Tao, Jie Yang, Wei Liu

Poster Spotlight Talks

Online Instrumental Variable Regression with Applications to Online Linear System Identification
Arun Venkatraman, Wen Sun, Martial Hebert, J. Andrew Bagnell, Byron Boots

Unsupervised Feature Selection on Networks: A Generative View
Xiaokai Wei, Bokai Cao, Philip S. Yu

New l1-Norm Relaxations and Optimizations for Graph Clustering
Feiping Nie, Hua Wang, Cheng Deng, Xinbo Gao, Xuelong Li, Heng Huang

Decentralized Approximate Bayesian Inference for Distributed Sensor Network
Behnam Gholami, Sejong Yoon, Vladimir Pavlovic

Uncertainty Propagation in Long-Term Structured Regression on Evolving Networks
Djordje Gligorijevic, Jelena Stojanovic, Zoran Obradovic

Efficient Nonparametric Subgraph Detection Using Tree Shaped Priors
Nannan Wu, Feng Chen, Jianxin Li, Baojian Zhou, Naren Ramakrishnan

WEST 102A, 1ST LEVEL
VIS6: Image Recognition and Retrieval

Oral Presentations

Face Model Compression by Distilling Knowledge from Neurons
Ping Luo, Zhenyao Zhu, Ziwei Liu, Xiaogang Wang, Xiaoou Tang

Deep Quantization Network for Efficient Image Retrieval
Yue Cao, Mingsheng Long, Jianmin Wang, Han Zhu, Qingfu Wen

Representing Sets of Instances for Visual Recognition
Jianxin Wu, Bin-Bin Gao, Guoqing Liu

Understanding Emerging Spatial Entities
Jinyoung Yeo, Jin-woo Park, Seung-won Hwang

Poster Spotlight Talks

Discrete Image Hashing Using Large Weakly Annotated Photo Collections
Hanwang Zhang, Na Zhao, Xindi Shang, Huanbo Luan, Tat-seng Chua

Building a Large Scale Dataset for Image Emotion Recognition: The Fine Print and the Benchmark
Quanzeng You, Jiebo Luo, Hailin Jin, Jianchao Yang

Joint Multi-View Representation Learning and Image Tagging
Zhe Xue, Guorong Li, Qingming Huang

On the Performance of GoogLeNet and AlexNet Applied to Sketches
Pedro Ballester, Ricardo Matsumura Araujo

Supervised Hashing via Uncorrelated Component Analysis
SungRyull Sohn, Hyunwoo Kim, Junmo Kim

Column Sampling Based Discrete Supervised Hashing
Wang-Cheng Kang, Wu-Jun Li, Zhi-Hua Zhou

Online Cross-Modal Hashing for Web Image Retrieval
Liang Xie, Jialie Shen, Lei Zhu

WEST 102B, 1ST LEVEL
ML22: Classification

Oral Presentations

Multi-Label Manifold Learning
Peng Hou, Xin Geng, Min-Ling Zhang

Metric Learning for Ordinal Data
Yuan Shi, Wenzhe Li, Fei Sha

A Scalable and Extensible Framework for Superposition-Structured Models
Shenjian Zhao, Cong Xie, Zhihua Zhang

Sparse Perceptron Decision Tree for Millions of Dimensions
Weiwei Liu, Ivor W. Tsang

Poster Spotlight Talks

Group and Graph Joint Sparsity for Linked Data Classification
Longwen Gao, Shuigeng Zhou

Uncorrelated Group LASSO
Deguang Kong, Ji Liu, Bo Liu, Xuan Bao

Learning Sparse Confidence-Weighted Classifier on Very High Dimensional Data
Mingkui Tan, Yan Yan, Li Wang, Anton Van Den Hengel, Ivor W. Tsang, Qinfeng (Javen) Shi

Co-Regularized PLSA For Multi-Modal Learning
Xin Wang, Ming-Ching Chang, Yiming Ying, Siwei Lyu

Optimizing Multivariate Performance Measures from Multi-View Data
Jim Jing-Yan Wang, Ivor Wai-Hung Tsang, Xin Gao

Constrained Submodular Minimization for Missing Labels and Class Imbalance in Multi-Label Learning
Baoyuan Wu, Siwei Lyu, Bernard Ghanem

Veto-Consensus Multiple Kernel Learning
Yuxun Zhou, Ninghang Hu, Costas J. Spanos

WEST 102C, 1ST LEVEL
GTEP6: Social Choice I

Oral Presentations

When Can the Maximin Share Guarantee Be Guaranteed?
David Kurokawa, Ariel D. Procaccia, Junxing Wang

Multiwinner Analogues of the Plurality Rule: Axiomatic and Algorithmic Perspectives
Piotr Faliszewski, Piotr Skowron, Arkadii Slinko, Nimrod Talmon

An Algorithmic Framework for Strategic Fair Division
Simina Brânzei, Ioannis Caragiannis, David Kurokawa, Ariel D. Procaccia

Multi-Attribute Proportional Representation
Jérôme Lang, Piotr Skowron

Poster Spotlight Talks

Complexity of Shift Bribery in Committee Elections
Robert Bredereck, Piotr Faliszewski, Rolf Niedermeier, Nimrod Talmon

Preferences Single-Peaked on Nice Trees
Dominik Peters, Edith Elkind

Reinstating Combinatorial Protections for Manipulation and Bribery in Single-Peaked and Nearly Single-Peaked Electorates
Vijay Menon, Kate Larson

Quantitative Extensions of the Condorcet Jury Theorem with Strategic Agents
Lirong Xia

Frugal Bribery in Voting
Palash Dey, Neeldhara Misra, Y. Narahari

WEST 106A, 1ST LEVEL
CSUST2: Sustainability: Social and Health

Oral Presentations

Benders Decomposition for Large-Scale Prescriptive Evacuations
Julia Romanski, Pascal Van Hentenryck

Topic Models to Infer Socio-Economic Maps
Lingzi Hong, Enrique Frias-Martinez, Vanessa Frias-Martinez

Transfer Learning from Deep Features for Remote Sensing and Poverty Mapping
Michael Xie, Neal Jean, Marshall Burke, David Lobell, Stefano Ermon

Optimizing Infrastructure Enhancements for Evacuation Planning
Kunal Kumar, Julia Romanski, Pascal Van Hentenryck

Poster Spotlight Talks

Achieving Stable and Fair Profit Allocation with Minimum Subsidy in Collaborative Logistics
Lucas Agussurja, Hoong Chuin Lau, Shih-Fen Cheng

Predicting Spatio-Temporal Propagation of Seasonal Influenza Using Variational Gaussian Process Regression
Ransalu Senanayake, Simon O'Callaghan, Fabio Ramos

Shortest Path Based Decision Making Using Probabilistic Inference
Akshat Kumar

An Algorithm to Coordinate Measurements Using Stochastic Human Mobility Patterns in Large-Scale Participatory Sensing Settings
Alexandros Zenonos, Sebastian Stein, Nicholas R. Jennings

A Unifying Variational Inference Framework for Hierarchical Graph-Coupled HMM with an Application to Influenza Infection
Kai Fan, Chunyuan Li, Katherine Heller

Intelligent Habitat Restoration under Uncertainty
Tommaso Urli, Jana Brotánková, Philip Kilby, Pascal Van Hentenryck

Adaptable Regression Method for Ensemble Consensus Forecasting
John K. Williams, Peter P. Neilley, Joseph P. Koval, Jeff McDonald

Spatially Regularized Streaming Sensor Selection
Changsheng Li, Fan Wei, Weishan Dong, Xiangfeng Wang, Junchi Yan, Xiaobin Zhu, Qingshan Liu, Xin Zhang

WEST 106B, 1ST LEVEL
Senior Member Talks 2

Blue Sky Talk

Ethical Dilemmas for Adaptive Persuasion Systems
Oliviero Stock, Marco Guerini, Fabio Pianesi

Summary Talks

Ontology Instance Linking: Towards Interlinked Knowledge Graphs
Jeff Heflin, Dezhao Song

Natural Language Processing for Enhancing Teaching and Learning
Diane Litman

Strategic Behaviour When Allocating Indivisible Goods
Toby Walsh

Rational Verification: From Model Checking to Equilibrium Checking
Michael Wooldridge, Julian Gutierrez, Paul Harrenstein, Enrico Marchioni, Giuseppe Perelli, Alexis Toumi

3:30-4:00
Coffee Break

Tuesday, February 16 — 4:00 PM–8:30 PM

4:00-5:00

WEST 301A, 3RD LEVEL

AAAI-16 Invited Panel

Autonomous Flight
Panelists: Mykel Kochenderfer (cochair), Ella Atkins (cochair), Amy Pritchett, Claire Tomlin, Jonathan How

WEST 101B, 1ST LEVEL

NLP9: Ordered Language Phenomena

Oral Presentations

Tweet Timeline Generation with Determinantal Point Processes
Jin-ge Yao, Feifan Fan, Wayne Xin Zhao, Xiaojun Wan, Edward Chang, Jianguo Xiao

Listen, Attend, and Walk: Neural Mapping of Navigational Instructions to Action Sequences
Hongyuan Mei, Mohit Bansal, Matthew R. Walter

Jointly Modeling Topics and Intents with Global Order Structure
Bei Chen, Jun Zhu, Nan Yang, Tian Tian, Ming Zhou, Bo Zhang

Poster Spotlight Talks

Syntactic Skeleton-Based Translation
Tong Xiao, Jingbo Zhu, Chunliang Zhang, Tongran Liu

Joint Word Segmentation, POS-Tagging and Syntactic Chunking
Chen Lyu, Yue Zhang, Donghong Ji

Labeling the Semantic Roles of Commas
Naveen Arivazhagan, Christos Christodouloupoulos, Dan Roth

WEST 101C, 1ST LEVEL

KRR5: Action

Oral Presentations

Decidable Verification of Golog Programs over Non-Local Effect Actions
Benjamin Zarrieß, Jens Claßen

Continual Planning in Golog
Till Hofmann, Tim Niemueller, Jens Claßen, Gerhard Lakemeyer

Mapping Action Language BC to Logic Programs: A Characterization by Postulates
Haodi Zhang, Fangzhen Lin

Poster Spotlight Talks

Verifying ConGolog Programs on Bounded Situation Calculus Theories
Giuseppe De Giacomo, Yves Lespérance, Fabio Patrizi, Sebastian Sardina

Verb Pattern: A Probabilistic Semantic Representation on Verbs
Wanyun Cui, Xiyou Zhou, Hangyu Lin, Yanghua Xiao, Haixun Wang, Seung-won Hwang, Wei Wang

WEST 106B, 1ST LEVEL

What's Hot Talks 3 (4:00-4:45)

What's Hot at RoboCup
Peter Stone

General Video Game AI: Competition, Challenges, and Opportunities
Diego Perez Liebana, Spyridon Samothrakis, Julian Togelius, Simon M. Lucas, Tom Schaul

AAMAS 2015
Maria Gini

5:00-5:10

Transition

5:10-6:10

WEST 301A, 3RD LEVEL

AAAI Community Meeting

6:30-8:30

WEST 301BC, 3RD LEVEL

AAAI-16 Poster / Demo Reception 3

All technical spotlight papers presented earlier today will be presented in poster format. The following demos will also be presented this evening:

Jikan to Kukan: A Hands-On Musical Experience in AI, Games and Art
Georgia Rossmann Martins, Mário Escarce Junior, Leandro Soriano Marcolino

Modeling and Experimentation Framework for Fuzzy Cognitive Maps
Maikel Leon Espinosa, Gonzalo Napoles Ruiz

A Visual Semantic Framework for Innovation Analytics
Walid Shalaby, Kripa Rajshekhar, Wlodek Zadrozny

Write-righter: An Academic Writing Assistant System
Yuanchao Liu, Xin Wang, Ming Liu, Xiaolong Wang

A Fraud Resilient Medical Insurance Claim System
Yuliang Shi, Chenfei Sun, Qingzhong Li, Lizhen Cui, Han Yu, Chunyan Miao

Shoot to Know What: An Application of Deep Networks on Mobile Devices
Jiaxiang Wu, Qinghao Hu, Cong Leng, Jian Cheng

SAPE: A System for Situation-Aware Public Security Evaluation
Shu Wu, Qiang Liu, Ping Bai, Liang Wang, Tieniu Tan

SVVAMP: Simulator of Various Voting Algorithms in Manipulating Populations
François Durand, Fabien Mathieu, Ludovic Noirie

Information Credibility Evaluation on Social Media
Shu Wu, Qiang Liu, Yong Liu, Liang Wang, Tieniu Tan

Wednesday, February 17 — 8:50 AM–12:42 PM

8:50–9:50

WEST 301C, 3RD LEVEL

AAAI-16 Invited Talk

Reachability and Learning for Hybrid Systems
Claire Tomlin

9:50–10:00

Transition

10:00-10:54

WEST 101A, 1ST LEVEL

ML23: Reinforcement Learning II

Oral Presentations

Model-Free Preference-Based Reinforcement Learning
Christian Wirth, Johannes Fürnkranz, Gerhard Neumann

Truncated Approximate Dynamic Programming with Task-Dependent Terminal Value
Amir-massoud Farahmand, Daniel N. Nikovski, Yuji Igarashi, Hiroki Konaka

Offline Evaluation of Online Reinforcement Learning Algorithms
Travis Mandel, Yun-En Liu, Emma Brunskill, Zoran Popovi?

WEST 101B, 1ST LEVEL

ML24: Dimensionality Reduction

Oral Presentations

Nonlinear Feature Extraction with Max-Margin Data Shifting
Jianqiao Wangni, Ning Chen

Multitask Generalized Eigenvalue Program
Boyu Wang, Joelle Pineau, Borja Balle

Reduction Techniques for Graph-Based Convex Clustering
Lei Han, Yu Zhang

WEST 101C, 1ST LEVEL

KRR6: Languages and Complexity

Oral Presentations

The Complexity of LTL on Finite Traces: Hard and Easy Fragments
Valeria Fionda, Gianluigi Greco

SDDs Are Exponentially More Succinct than OBDDs
Simone Bova

Zero-Suppressed Sentential Decision Diagrams
Masaaki Nishino, Norihito Yasuda, Shin-ichi Minato, Masaaki Nagata

WEST 106A, 1ST LEVEL

INT1: Integrated AI Capabilities

Oral Presentations

A Framework for Resolving Open-World Referential Expressions in Distributed Heterogeneous Knowledge Bases
Tom Williams, Matthias Scheutz

Affective Personalization of a Social Robot Tutor for Children's Second Language Skills
Goren Gordon, Samuel Spaulding, Jacqueline Kory Westlund, Jin Joo Lee, Luke Plummer, Marayna Martinez, Madhurima Das, Cynthia Breazeal

Bagging Ensembles for the Diagnosis and Prognostication of Alzheimer's Disease
Peng Dai, Femida Gwadry-Sridhar, Michael Bauer, Michael Borrie

WEST 106B, 1ST LEVEL

10:00-10:45

What's Hot Talks 4

Competition of Distributed and Multiagent Planners (CoDMAP)
Michal Stolba, Antonín Komenda, Daniel L. Kovacs

What's Hot in the Answer Set Programming Competition
Martin Gebser, Marco Maratea, Francesco Ricca (Talk presented by Mario Alviano)

What's Hot in Heuristic Search? (SoCS 2015)
Roni Stern, Levi H. S. Lelis

10:54-11:30

Coffee Break

11:30-12:42

WEST 101A, 1ST LEVEL

ML25: Reinforcement Learning III

Oral Presentations

Randomised Procedures for Initialising and Switching Actions in Policy Iteration
Shivaram Kalyanakrishnan, Neeldhara Misra, Aditya Gopalan

Increasing the Action Gap: New Operators for Reinforcement Learning
Marc G. Bellemare, Georg Ostrovski, Arthur Guez, Philip S. Thomas, Remi Munos

Generalized Emphatic Temporal Difference Learning: Bias-Variance Analysis
Assaf Hallak, Aviv Tamar, Remi Munos, Shie Mannor

Deep Reinforcement Learning with Double Q-Learning
Hado van Hasselt, Arthur Guez, David Silver

WEST 101B, 1ST LEVEL

ML26: Auto-Encoders

Oral Presentations

Consensus Style Centralizing Auto-Encoder for Weak Style Classification
Shuhui Jiang, Ming Shao, Chengcheng Jia, Yun Fu

Semisupervised Autoencoder for Sentiment Analysis
Shuangfei Zhai, Zhongfei (Mark) Zhang

Spectral Bisection Tree Guided Deep Adaptive Exemplar Autoencoder for Unsupervised Domain Adaptation
Ming Shao, Zhengming Ding, Handong Zhao, Yun Fu

The $l_{2,1}$-Norm Stacked Robust Autoencoders for Domain Adaptation
Wenhao Jiang, Hongchang Gao, Fu-lai Chung, Heng Huang

WEST 101C, 1ST LEVEL

GTEP7: Social Choice II

Oral Presentations

Optimal Aggregation of Uncertain Preferences
Ariel D. Procaccia, Nisarg Shah

Judgment Aggregation under Issue Dependencies
Marco Costantini, Carla Groenland, Ulle Endriss

Agenda Separability in Judgment Aggregation
Jérôme Lang, Marija Slavkovik, Srdjan Vesic

Rules for Choosing Societal Tradeoffs
Vincent Conitzer, Rupert Freeman, Markus Brill, Yuqian Li

WEST 106A, 1ST LEVEL

CSUST3: Sustainability: Traffic, Algorithms

Oral Presentations

Robust Decision Making for Stochastic Network Design
Akshat Kumar, Arambam James Singh, Pradeep Varakantham, Daniel Sheldon

Optimizing Resilience in Large Scale Networks
Xiaojian Wu, Daniel Sheldon, Shlomo Zilberstein

Understanding City Traffic Dynamics Utilizing Sensor and Textual Observations
Pramod Anantharam, Krishnaprasad Thirunarayan, Surendra Marupudi, Amit Sheth, Tanvi Banerjee

Multiagent-Based Route Guidance for Increasing the Chance of Arrival on Time
Zhiguang Cao, Hongliang Guo, Jie Zhang, Ulrich Fastenrath