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| **Monday, January 26** | | |
| Tutorial Forum | | |
| Workshops | | |
| AAAI/SIGAI DC | | |
| Open House | Speed Dating |
| Robotics / RoboCup | Opening Reception |

| **Tuesday, January 27** | | |
| AAAI / IAAI Welcome / AAAI Awards | Shaky Celebration |
| Invited Talks: Bagnell and Etzioni | Poster / Demo Session 1 |
| AAAI / IAAI Technical Program | Doctoral Consortium, |
| Funding Information Session | Virtual Agent Demos |
| Robotics / RoboCup / Exhibits | Robotics Demos |
| | Fellows Dinner |

| **Wednesday, January 28** | | |
| Women’s Mentoring Breakfast | AAAI Community Meeting |
| AAAI / IAAI Technical Program | Poster / Demo Session 2 |
| Senior Member Blue Sky / | Student Abstract Posters |
| What’s Hot Talks | Games Showcase, |
| Classic Paper / Robotics Students | Robotics Demos |
| Robotics / Exhibits | Easily Accessible Papers |
| | Game Night |

| **Thursday, January 29** | | |
| Invited Talks: Sellmann | Debate on Autonomous |
| AAAI / IAAI Technical Program | Weapons |
| What’s Hot Talks | Poster / Demo Session 3 |
| Robotics / Exhibits | Student Abstract Posters |
| | Games Showcase |
| | Easily Accessible Papers |
| | Robotics Demos |

| **Friday, January 30** | | |
| Invited Talks: Getoor and Bowling | | |
| AAAI-15 Awards Ceremony | | |
| AAAI / Technical Program | | |
| Senior Member Summary Talks | | |
| | | |
Sponsoring Organizations

AAAI gratefully acknowledges the generous contributions of the following organizations and individuals to AAAI-15:

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- CRA Computing Community Consortium (CCC)
- David E. Smith

**In Cooperation Organizations**
- University of Texas at Austin Computer Science Department
- IEEE Robotics and Automation Society (RAS)
- RoboCup Federation

Acknowledgments

The Association for the Advancement of Artificial Intelligence acknowledges and thanks the following individuals for their generous contributions of time and energy to the successful creation and planning of the Twenty-Ninth AAAI Conference on Artificial Intelligence and the Twenty-Seventh Conference on Innovative Applications of Artificial Intelligence. (A complete listing of the AAAI-15 and IAAI-15 Program Committee members appears in the conference proceedings.)

AAAI Conference Committee

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- Shlomo Zilberstein (University of Massachusetts Amherst, USA)

**AAAI-15 Program Cochairs**
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- Sven Koenig (University of Southern California, USA)

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Mausam (Indian Institute of Technology, India)

Workshop Cochairs
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Daniel Lowd (University of Oregon, USA)

Student Abstract and Poster Cochairs
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Daniele Magazzeni (King’s College London, UK)  
Sebastian Sardina (RMIT, Australia)

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Matthew Taylor (Washington State University, USA)  
David L. Roberts (North Carolina State University, USA)

General Student Activities and Outreach Cochairs
William Yeoh (New Mexico State University, USA)  
Nathan Sturtevant (University of Denver, USA)

Women’s Mentoring Breakfast
Marie desJardins (University of Maryland, Baltimore County, USA)  
Amy McGovern (University of Oklahoma, USA)  
Kiri Wagstaff (Jet Propulsion Laboratory, USA)

Demos Chair
Carlos Linares Lopez (Universidad Carlos III de Madrid, Spain)

Robotics Cochairs
George Konidaris (Massachusetts Institute of Technology, USA)  
Brad Knox (Massachusetts Institute of Technology, USA)  
Nick Hawes (University of Birmingham, UK)

Shakey Celebration Chair
Ben Kuipers (University of Michigan, USA)

RoboCup Exhibition Cochairs
Peter Stone (University of Texas, Austin, USA)  
Daniel Lee (University of Pennsylvania, USA)

Computer Game Showcase
Robert Holte (University of Alberta, Canada)  
Ryan Hayward (University of Alberta, Canada)  
Nathan Sturtevant (University of Denver, USA)  
Martin Mueller (University of Alberta, Canada)

General Game-Playing Competition
Bertrand Decoster (Stanford University, USA)  
Michael Genesereth (Stanford University, USA)

Video Competition Cochairs
Sabine Hauert (Massachusetts Institute of Technology, USA)

Mauro Birattari (Universite Libre de Bruxelles, Belgium)

Virtual Agents Exhibit
Marc Cavazza (Teesside University, UK)

Fundraising Cochairs
Vasant Honavar (Penn State University, USA)  
Sandip Sen (The University of Tulsa, USA)

Publicity and Social Media Chair
Yixin Chen (Washington University in St. Louis, USA)

Funding Information Session Cochairs
Berthe Choueiry (University of Nebraska-Lincoln, USA)  
Sandip Sen (University of Tulsa, USA)

Debate on Autonomous Weapons Cochairs
Stuart Russell (University of California, Berkeley, USA)  
Toby Walsh (NICTA and University of New South Wales, Australia)

AAAI-15 Advisory Board
Carla E. Brodley (Northeastern University, USA)  
Marie desJardins (University of Maryland, Baltimore County, USA)  
Jörg Hoffmann (Saarland University, Germany)  
Michael Littman (Brown University, USA)  
Bart Selman (Cornell University)

Peter Stone (University of Texas at Austin, USA)

Honorable Mention
Using CSP Look-Back Techniques to Solve Real-World SAT Instances
Roberto J. Bayardo Jr. and Robert C. Schrag

For significant contributions to enhance proof procedures for propositional satisfiability on large instances of real-world problems.

2015 Distinguished Service Award
The AAAI Distinguished Service award recognizes one individual each year for extraordinary service to the AI community. The 2015 recipient is Kenneth M. Ford, Florida Institute for Human and Machine Cognition, who is being recognized for his outstanding contributions to the field of artificial intelligence through sustained service, including the founding of the Florida Institute for Human and Machine Cognition (IHMC), leadership roles at NASA, and his work on the advisory boards of federal science and technology research organizations.

2015 Feigenbaum Prize
The AAAI Feigenbaum Prize was established to recognize and encourage outstanding artificial intelligence research advances that are made by using experimental methods of computer science. The 2015 prize is being awarded to the Eric J. Horvitz, Microsoft Research, for sustained and high-impact contributions to the field of artificial intelligence through the development of computational models of perception, reflection and action, and their application in time-critical decision making, and intelligent information, traffic and healthcare systems. The Feigenbaum Prize is supported by a grant from the Feigenbaum Nii Foundation.
IAAAI-15 Deployed Applications Awards

The six IAAAI-15 Deployed Application Awards will be announced during the Opening Ceremony on Tuesday, January 27 by IAAAI-15 Chair David Gunning and Cochair Peter Yeh. Certificates will be presented during paper sessions.

Activity Planning for a Lunar Orbital Mission
John L. Bresina

Robust System for Identifying Procurement Fraud
Amit Dharandhar, Rajesh Ravi, Bruce Graves, Gopi krishnan Maniachari, Markus Etli

Position Assignment on an Enterprise Level Using Combinatorial Optimization
Leonard Kinnaird-Hoether, Chris Dormann

Graph Analysis for Detecting Fraud, Waste, and Abuse in Healthcare Data
Juan Liu, Eric Bier, Aaron Wilson, Tomo Honda, Srirachar Kumar, Leilani Gilpin, John Guerra-Gomez, Daniel Davies

Planned Protest Modeling in News and Social Media
Sathappan Mathias, Bert Huang, Jaime Arredondo, David Mares, Lise Getoor, Graham Katz, Naren Ramakrishnan

Process Diagnosis System (PDS) - A 30 Year History
Edward D Thompson, Ethan Pelliche, James C Bellows, Benjamin E Bassford, Edward J Skiko, Mark S Fox

IAAAI-15 Awards

The IAAAI-15 Awards will be presented by Program Cochairs Blai Bonet and Sven Koenig.

IAAAI-15 Outstanding Paper Award

This year, IAAAI’s Conference on Artificial Intelligence honors the following two papers, which exemplify high standards in technical contribution and exposition by regular and student authors. In addition, the program committee selected one paper for honorable mention in each category, based on their overall high quality and outstanding contribution.

IAAAI-15 Outstanding Paper Award

From Non-Negative to General Operator Cost Partitioning
Florian Pommerening, Malte Helmert, Gabriele Röger and Jendrik Seipp

Honorable Mention

Predicting the Demographics of Twitter Users from Website Traffic Data
Aron Culotta, Nirmal Kumar Ravi, Jennifer Cutler

IAAAI-15 Outstanding Student Paper Award

Surpassing Human-Level Face Verification Performance on LFW with GaussianFace
Chaobao Lu and Xiaoxin Tang

Honorable Mention

Sparse Bayesian Multiview Learning for Simultaneous Association Discovery and Diagnosis of Alzheimer’s Disease
Shandian Zhe, Zenglin Xu, Yuan Qi and Peng Yu

IAAAI-15 Blue Sky Idea Awards

IAAI, 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:

Sarat Kraus for Intelligent Agents for Rehabilitation and Care of Disabled and Chronic Patients
Sarathkumar Maniachari, Markus Etli

Michela Milano and Pascal Van Hentenryck for Emerging Architectures for Global System Science
Xiaojin Zhu for Machine Teaching: An Inverse Problem to Machine Learning and an Approach toward Optimal Education
Sarathkumar Maniachari, Markus Etli

Travis Mandel (University of Washington, USA)
Nicholas Mattei (NICTA and UNSW, Australia)
Ingo Pill (Graz University of Technology, Austria)
Erik Talvitie (Franklin & Marshall College, USA)
Paul Vernaza (Carnegie Mellon University, USA)
Xinhua Zhang (University of Alberta, Canada)

Social Events

Opening Reception

The IAAAI-15 Opening Reception will be held Monday, January 26, 6:00 – 8:30 PM in the Gates-Dell Complex of the Computer Science Department at the University of Texas at Austin. In addition to the traditional opportunity to socialize, some lab tours will be available during the course of the evening. A variety of heavy hors d’oeuvres and one complimentary beverage will be served. A no-host bar will also be available. Admission to the reception is included in the IAAAI-15 technical registration. A $55.00 per person fee ($30.00 for children) will be charged for guests and other nontechnical conference registrants. IAAAI has arranged for transportation to and from the reception. The first shuttle will depart from the curb in front of the main hotel entrance at 5:30 PM. (Participants in the speed dating event will be able to board shuttles to the event at 7:15 PM.) The final shuttle to the hotel will depart from the reception at 9:00 PM.

Poster / Demo Sessions

Zilker Ballroom
Tuesday, January 27, 7:15 – 8:45 PM

Wednesday, January 28, 6:30 – 8:00 PM

Each IAAAI-15 poster / demo session will include posters by authors who presented poster ads that day (please see schedule for detail). In addition, a total of 21 technical demos will be divided among the three evening sessions. Tuesday evening will also include Doctoral Consortium posters and Virtual Agents demos. Wednesday and Thursday will include posters by student abstract authors who will present poster ads during the lunchtime session prior to their assigned poster session, as well as the Games Showcase. Robotic exhibits and demos will be held each evening. (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 a supper buffet and a no-host bar. Admission to the reception is included in the IAAAI-15 registration. A $35.00 per person fee ($15.00 for children) will be charged for guests and other nontechnical conference registrants per night.

AAAI Speed-Dating

Monday, January 26, 6:00 PM – 7:00 PM, Zilker 3

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 6:00 PM sharp. There will be no admittance after 6:10 PM, and admittance is on a first-come basis.

AAAI Games Night

Wednesday, January 28, 8:15 PM – 10:00 PM, Foothills II, 17th Floor. Please see page 10 for more information.

AAAI Speed-Dating

Monday, January 26, 6:00 PM – 7:00 PM, Zilker 3

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 6:00 PM sharp. There will be no admittance after 6:10 PM, and admittance is on a first-come basis.

AAAI Games Night

Wednesday, January 28, 8:15 PM – 10:00 PM, Foothills II, 17th Floor. Please see page 10 for more information.

Audience Participation Awards

AAAI-15 will be making their final awards based on your feedback! You will have the opportunity to vote on the following awards during the course of the conference, the votes will be tallied, and the winners will be announced at the IAAAI-15 Awards Ceremony at 9:50 AM on Friday, January 30. Stay tuned to the social media channels (see page 9) for more information about how to cast your vote for Best Demonstration, Best Poster, and Video Competition People’s Choice awards.

Undergraduate Student Author Recognition

Special recognition certificates will be presented to authors of accepted AAAAI-15 technical papers who are currently undergraduate students.
Special Events and Programs

AAA1 Funding Information Session

Tuesday, January 27, 10:10 – 11:50 am, Texas VII

Following similar events at AAAI-06 and AAAI-13, attendees will have a chance to meet with United States funding agency program directors, who will touch on a variety of topics, such as current targets of funding initiatives and how to increase the success of your funding proposal. They will have suggestions on how to define the scope of your proposal, the type of research targeted, and the expectations for the outcome of the funded panel. Panelists will include Iyer Purush (ARO), Benjamin Knott (AFOSR), Hector Munoz-Avila (NSF), Lynne Parker (NSF), and William Regli (DARPA). The program will conclude with a Q&A session. The session will be chaired by Sandip Sen.

Shakey Celebration

Tuesday, January 27, 5:45 – 7:15 pm, Texas Ballroom

Shakey the Robot, conceived fifty years ago, was a seminal contribution to AI. Shakey perceived its world, planned how to achieve a goal, and acted to carry out that plan. This was revolutionary. We gather to celebrate Shakey, and to gain insights into how the AI revolution moves ahead. The Shakey Celebration will include a panel with Ed Feigenbaum, Peter Hart, and Nils Nilsson, along with other highlights of this historic project.

AAA1 Community Meeting

Wednesday, January 28, 5:30 – 6:30 pm, Texas Ballroom

AAA1 welcomes all conference attendees to this inaugural AAA1 community meeting, which will also serve as the AAA1 Annual Business Meeting. Please join us as we explore current initiatives, and help chart the future course and objectives of AAA1.

Moderator: Thomas G. Dietterich, AAA1 President

AAA1 Debate on Autonomous Weapons

Thursday, July 29, 5:45 pm – 6:45 pm, Texas Ballroom

Participants: Ron Arkin (Georgia Institute of Technology) and Stephen Goose (Human Rights Watch)

Moderator: Thomas G. Dietterich (Oregon State University), AAA1 President

Special Meetings

AAA1 Community Meeting / Annual Business Meeting

Please join us for the AAA1 community meeting and annual business meeting! We invite you to join the AAA1 Executive Council members, and bring your thoughts and ideas for the future of AAA1! The meeting will be held Wednesday, January 28, 5:30 – 6:30 pm in Texas Ballroom I. Everyone is welcome!

AAA1 Conference Committee Meeting

AAA1 Conference Committee Meeting will be held Thursday, January 29, 7:45 - 8:45 AM, Padre Island, 2nd Level.

AAA1 Executive Council Meeting

The AAA1 Executive Council Meeting will be held Monday, January 26, 9:00 AM - 4:00 PM, Foothills II, 17th Floor. Continental breakfast will be available at 8:30 AM.

AAA1 Futures Focus Group

The AAA1 Futures Focus Group Meeting will be held Thursday, January 29, 10:00 AM – 4:00 PM, Padre Island, 2nd Level.

AAA1 Press Conference

The AAA1 Press Conference will be held Tuesday, January 27, 11:00 AM – 12:00 PM, Padre Island, 2nd Level.

AAA1 Publications Committee Meeting

The AAA1 Publications Committee Meeting will be held Wednesday, January 28, 7:45 – 8:45 AM, Padre Island, 2nd Level.

AI Magazine Editorial Board Meeting

The AI Magazine Editorial Board Meeting will be held Tuesday, January 27, 12:00 - 1:00 PM, Foothills II, 17th Floor.

IJCAI Executive Board Meeting

The IJCAI Executive Board Meeting will be held Wednesday, January 28, 8:30 – 11:30 AM, Foothills II, 17th Floor.
Tutorial Forum

AAAI-15 technical registrants may attend 4-5 consecutive tutorials. Tutorials are 4 hours unless noted otherwise.

Sunday, January 25
9:00 AM – 1:00 PM
SA1: A Beginner’s Introduction to
Heuristic Search Planning
Malte Helmert, Gabriele Röger
Zilker 4, First Level
(9:00 AM – 12:30 pm)
SA2: Natural Language Processing in
Watson
James Fan, Ken Barker
Zilker 4, First Level
(9:00 AM – 1:00 PM)
SA3: Neuroevolution Reinforcement
Learning
Risto Miikkulainen
Texas I, Second Level
SA4: Probabilistic Programming
with Figaro
Ari Pfeffer, Brian Caffrey
Texas III, Second Level

Sunday, January 25
2:00 PM – 6:00 PM
SP1: Computing Game-Theoretic Solutions
Vincent Conitzer
Zilker 4, First Level
SP2: Data Analytics
with Electronic Health Records
Fei Wang
Zilker 2, First Level
SP3: How to Be a PhD Student
Eugene C. Freuder
Texas III, Second Level
(4:30 PM – 6:00 PM)
SP4: Human-in-the-Loop
Planning and Decision Support
Subbarao Kambhampati,
Kartik Talanadapula,
Texas I, Second Level

Monday, January 26
9:00 AM – 1:00 PM
MA1: AI for Smarter Cities. Hype or
Reality?: A Study in Dublin, Bologna,
Miami, and Rio
Pascal Hitzler, Freddy Lecue, Raghav
va Madhavraj, Jeff Z. Pan, Jianwen Wu
Zilker 4, First Level
MA2: Constraint-Based
Temporal Reasoning
Roman Barták, Robert A. Morris,
K. Brent Venable
Texas III, Second Level
MA3: Robocup
Dan Lee, Claude Sammut,
Luca Iocchi
Foothills II, 17th Floor
MA4: Submodularity in
Machine Learning Applications
Jeff Bilmes
Texas I, Second Level

Monday, January 26
2:00 PM – 6:00 PM
W15: Trajectory-Based Behavior Analytics
Big Bend A/B
9:15 AM – 4:30 PM
W17: Knowledge, Skill, and
Behavior Transfer in Autonomous Robots
1:15 PM – 6:00 PM
Zilker 3, First Level

Monday, January 26
9:00 AM – 5:00 PM
W18: Learning for General
Competency in Video Games
Texas V
9:00 AM – 5:00 PM

MP1: Artificial Intelligence and Techno-
logical Unemployment
Mohe Vardi
Texas III, Second Level
(2:00 PM – 3:45 PM)

MP2: Generalizing Optimization to
Equilibration: A New Foundation for
AI in the 21st Century
Sridhar Mahadevan
Zilker 4, First Level

MP3: Robot Learning
from Demonstration
Scott Niekum, Sonia Chernova,
Andreas Thomaz
Texas I, Second Level

MP4: Semantic Parsing with
Combinatory Categorial Grammars
Yosh Artzi, Nicholas FitzGerald,
Luke Zettlemoyer
Foothills II, 17th Floor

MP5: Voting Rules for AI
Toby Walsh, K. Brent Venable,
Francesca Rossi
Texas III, Second Level
(4:15 PM – 6:00 PM)

Workshop Program

Registration for a workshop requires a supplemental fee for AAAI-15 technical registrants. Individuals who do not wish to participate in any other AAAI-15 programs or events may elect the workshop only registration fee. Electronic copies of technical report papers have been circulated to preregistrants.

Sunday, January 25
W1: AI and Ethics
Hill Country A
8:45 AM – 6:00 PM
6:00 PM – 7:00 PM, Texas VI:
Joint session with W6
W2: AI for Cities
Hill Country B
8:45 AM – 5:30 PM
W5: Artificial Intelligence Applied to Assis-
tive Technologies and Smart Environments
Hill Country C
8:45 AM – 4:30 PM
W6: Beyond the Turing Test
Texas VI (lunch in Texas VII)
8:30 AM – 6:00 PM
6:00 PM – 7:00 PM:
Joint session with W1
W12: Planning, Search, and Optimization
Texas V
8:30 AM – 6:00 PM
W14: Scholarly Big Data: AI Perspectives,
Challenges, and Ideas
Big Bend C/D
9:15 AM – 5:00 PM

W15: Trajectory-Based Behavior Analytics
Big Bend A/B
9:15 AM – 4:30 PM
W17: Knowledge, Skill, and
Behavior Transfer in Autonomous Robots
Hill Country D
8:30 AM – 6:00 PM

Monday, January 26
W3: AI for Transportation: Advice,
Interactivity and Actor Modeling
Hill Country A
9:00 AM – 5:00 PM

W4: Algorithm Configuration
Hill Country B
8:45 AM – 6:00 PM
W7: Computational Sustainability
Texas VI
9:00 AM – 5:30 PM
W8: Computer Poker and
Imperfect Information
Hill Country D
9:45 AM – 5:30 PM
W9: Incentive and Trust in E-Communities
Big Bend A/B
9:15 AM – 12:30 PM
W11: Multiagent Interaction
without Prior Coordination
Hill Country C
9:00 AM – 5:30 PM
W16: World Wide Web and
Public Health Intelligence
Big Bend C/D
9:00 AM – 5:20 PM
W18: Learning for General
Competency in Video Games
Texas V
9:00 AM – 5:30 PM
Invited Talks

AAAI-15 and IAAI-15 Invited Talks will be held in two parallel sessions Tuesday, January 27 – Friday, January 30. The times and locations are included below. For special event plenary sessions, please see page 6.

Tuesday, 8:30 – 8:55 am, Zilker Ballroom
AAAI-15 / IAAI-15 Welcome and Opening Remarks
AAAI Organizational Awards/Honors
AAAI-15 / IAAI-15 Program Chairs

Tuesday, 9:00 AM – 9:50 AM, Texas Ballroom I–III
AAAI-15 Invited Talk

Artificial Intelligence, Machine Learning and Robotics: Interplay and Interaction
Drew Bagnell (Carnegie Mellon University)
Introduction by Michael Beetz
My talk will focus on theoretical and algorithmic ideas in machine learning and AI, and their origin in problems of robotics. Much of my talk will focus on no-regret online learning methods in machine learning and the critical role of interaction for learning in robotics. I will highlight the tremendous impact robotics has had in identifying key learning problems and suggesting algorithmic techniques; additionally, I will consider the remarkable tools that have been developed within AI and learning to address hard robotics problems. I’ll discuss a variety of machine learning techniques of increasing sophistication from the most familiar classification problems, to structured prediction, and to imitation learning. I will also address how to make reinforcement learning and learning control practical in robotics. Throughout, we will look at case studies in learning dexterous manipulation, activity forecasting of drivers and pedestrians, and imitation learning of robotic locomotion and rough-terrain navigation. These case studies highlight key challenges in applying AI and learning algorithms in practical settings.

Wednesday, 1:40 – 2:30 pm, Texas Ballroom I–III
AAAI-15 Invited Talk

Deep Learning
Geoffrey Hinton (University of Toronto and Google Inc)
Introduction by Stuart Russell
I will give a brief history of deep learning explaining what it is, what kinds of task it should be good for and why it was largely abandoned in the 1990’s. I will then describe how ideas from statistical physics were used to make deep learning work much better on small datasets. Finally I will describe how deep learning is now used by Google for speech recognition and object recognition and how it may soon be used for machine translation.

Wednesday, 1:40 – 2:30 pm, Texas Ballroom I–III
IAAI-15 Invited Talk

Data Science for Social Good: Using Your Powers To Make a Social Impact!
Rayid Ghani (University of Chicago)
Introduction by Peter Yeh
The past few years have seen an increasing demand for machine learning/data mining/data science powers. That’s wonderful for us data scientists but wouldn’t the world be so much better if we also used our computational and analytical powers for social good? In this talk, I’ll give examples from work going on around the world to show that there are a lot of important social problems in the world that could use our help — from helping students graduate high school to helping disaster victims to improving health.

Thursday, 9:00 – 9:50 AM, Zilker Ballroom
AAAI-15 Invited Talk

Intelligent Decisions
Meinolf Sellmann
(IBM Thomas J. Watson Research Center)
Introduction by Holger H. Hoos
At its best intelligence creates aesthetics and beauty, yet from a utilitarian perspective intelligence primarily serves the purpose of making better decisions. Today’s prescriptive decision support systems are most effective when applied to specific recurring operational problems. Recent advances in AI technology have re-vived the vision of commercially viable cooperative “strategic” decision support systems. These “cognitive systems” integrate information retrieval, knowledge representation, interactive modelling, as well as social and self-learning capabilities with logic reasoning and probabilistic decision making under uncertainty. We provide a snapshot of the current technology status by showcasing several projects that ultimately aim at intelligent human-in-the-loop decision making.

Friday, 9:00 – 9:50 AM, Zilker Ballroom 1–2
AAAI-15 Invited Talk

Using Statistics and Semantics to Solve Big (Graph) Data Problems
Lise Getoor (University of California, Santa Cruz)
Introduction by Luc de Raedt
Big data problems benefit from modeling both structure and uncertainty, so there is a growing need for tools to develop large, complex probabilistic models. These tools should combine high-level knowledge representation with general purpose, scalable algorithms for learning and inference. In this talk, I will survey some of the recent work from the statistical relational learning community on learning and inference in richly-structured, multi-relational network data. I will highlight both important developments and opportunities in which ideas from AI can have great impact on upcoming challenges within the machine learning, data science and data mining communities.

Friday, 9:00 – 9:50 AM, Zilker Ballroom 3–4
AAAI-15 Invited Talk

von Neumann’s Dream
Michael Bowling
(University of Alberta)
Introduction by Tuomas Sandholm
Chess has long served as the measure of progress for artificial intelligence. However, at the very beginning of computing and artificial intelligence, John von Neumann dreamed of a different game: “Real life is not like [chess]. Real life consists of bluffing, of little tactics of deception, of asking yourself what is the other man going to think I mean to do. And that is what games are about in my theory.” The game von Neumann hinted at is poker, and it played a foundational role in his formalization of game theory. Shortly after launching the field of game theory, he practically abandoned his new discipline to focus on the budding field of computing. He saw computers as the way to make his mathematics workable. Now, over 70 years later with both significant advances in computing and game theoretic algorithms, von Neumann’s dream is now a reality. Heads-up limit Texas hold’em poker, the smallest variant of poker played by humans, is essentially solved. In this talk, I will discuss how we accomplished this landmark result, along with the substantial scientific advances in our failed attempts along the way.

Senior Member Presentations
Tuesday – Friday, January 27–30, Texas Ballroom VII
The AAAI-15 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. Seven summary talks and eight Blue Sky talks will be presented (please see the conference schedule on pages 15–28). For more information about the Blue Sky Awards, please see page 5.

What’s Hot Talks
Tuesday – Thursday, January 27–29, Texas Ballroom I
The AAAI-15 “What’s Hot” track aims to present exciting recent advances and current challenges in subareas of Artificial Intelligence with major conferences or competitions. Twelve “What’s Hot” presentations will be presented, representing the CPVR, CHI, HCOMP, IROS, KDD, and KR conferences, as well as the Angry Birds Artificial Intelligence, Automated Negotiating Agents, General Game Playing, RoboCup, Planning, SAT and ASP competitions (please see the conference schedule on pages 15–28).
Student Activities

As part of a focused effort to increase student participation at AAAI, the conference committee has organized a series of student activities at AAAI-15. We invite you to participate for an enriched AAAI experience!

More information and instructions for the following activities can be found at movingai.com/AAA15/

Social Media Activities
Please join us on social media for AAAI-15! Like us on Facebook, follow us on Twitter, connect on LinkedIn, share your photos on our Flickr group, and tweet about our conference using the hashtag #AAA15.

Social Media Games: Scavenger Hunts
movingai.com/AAA15/game.html

We will host online scavenger hunts daily from Tuesday to Thursday. Participate for a chance to win prizes and bragging rights!

Dining/Group Meals
Meet: First 10 minutes of each lunch and dinner break in the foyer of the Zilker Ballroom

Don’t want to dine alone? Get paired up with other students and researchers for group meals as well as get suggestions on nearby restaurants!

Student Newcomers Lunch
Sunday, January 25, 12:45 – 2:00 PM
Foothills II, 17th Floor

The first Student Newcomer Lunch will provide an opportunity for students new to AAAI to meet fellow students and senior AI researchers prior to the commencement of the main conference. Attendance is limited to 70 students and all places have currently been filled. Admittance is by ticket only.

AAAI Tutorial (SP3) on How to Be a PhD Student
Sunday, January 25, 4:30 PM – 6:00 PM (1.5 hours)
Texas III, Second Level

Gene Freuder, University College Cork, will offer advice on how to meet the challenges and take advantage of the opportunities of being a PhD student.

AAAI/SIGAI Doctoral Consortium
Sunday and Monday, January 25–26
Texas II, Second Level

The Twentieth 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 sixteen students accepted to participate in this program will also participate in the AAAI-15 evening Poster / Demo Session 1 on Tuesday, January 27. All interested AAAI-15 student registrants are invited to observe the presentations and participate in discussions at the workshop. AAAI and SIGAI gratefully acknowledge grants from the National Science Foundation and David E. Smith, providing partial funding for this event. The final schedule is available at cigar.csc.ncsu.edu/aaai2015/dc/

AAAI-15 Open House
Monday, January 26, 9 AM – 5:30 PM
Zilker Ballroom 1-3, First Level

The AAAI-15 Open House will welcome high-school students in the Austin area, the general public, graduate and undergraduate students, and established AI researchers. The day will comprise a variety of exhibits and demonstrations, including the posters and demos listed on page 10, as well as the Robotics exhibits, Virtual Agent demos, and a special RoboCop 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!

For complete schedule information, please see full details on page 10.

Research Speed Dating
Monday, January 26
6:30 – 7:00 pm, Zilker Ballroom 3

Want to get to know more researchers? Hold off going to the conference reception (we’ll save food for you) and attend the research speed dating event on Monday evening! 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!

Breakfast with Champions: A Women’s Mentoring Event
Wednesday, January 28, 7:45 – 8:45 AM
Foothills II, 17th Floor

AAAI is holding an inaugural women’s mentoring event for women students to meet with senior women in computer science and/or artificial intelligence. Space is very limited. Admittance is by ticket only.

Easily Accessible Papers
Wednesday and Thursday, January 28–29

Do you feel that some AAAI papers and talks are too difficult to understand? Attend accessible paper talks (designated in program)! These are papers that the authors and reviewers have found to be more easily accessible than typical papers. Then, meet with the authors to hear more about the work and participate in a Q&A session. Easily accessible paper authors will be available on Wednesday and Thursday evenings (see schedule below) to meet and discuss their research with interested attendees. These discussions are open to anyone with interest, but are intended to help expose the research process to students new to research.

Wednesday, January 28
Meet at 4:30 – 5:30 PM
On Machine Learning towards Predictive Sales
Pipeline Analytics
Junchi Yan, Chao Zhang, Hongyuan Zha, Min Gong, Changhua Sun, Jin Huang, Stephen Chu, Xiaokang Yang
Hill Country AB

Modelling Class Noise with Symmetric and Asymmetric Distributions
Jun Du, Zhikun Cai
Hill Country AB

PD Disease State Assessment in Naturalistic Environments Using Deep Learning
Nils Yannick Hammerla, James M. Fisher, Peter Andreas, Lynn Rochester, Richard Walker, Thomas Plötz
Hill Country AB

Multi-Document Summarization Based on Two-Level Sparse Representation Model
He Liu, Hongfang Yu, Zhi-Hong Deng
Hill Country CD

Learning Greedy Policies for the Easy-First Framework
Jun Xie, Chaoyi Mu, Jaradhan Rao Doppa, Prashanth Mannem, Xuandi Fan, Thomas G. Dietterich, Prasad Tadepalli
Hill Country CD

Chinese Common Noun Phrase Resolution: An Unsupervised Probabilistic Model Rivaling Supervised Resolvers
Chen Chen, Vincent Ng
Hill Country CD

Thursday, January 29
Meet at 4:45 – 5:45 PM
Deep Representation Learning with Target Coding
Shaoyang Yang, Peng Luo, Chen Changle Yuy, Kenneth W. Shum, Xiaosu Yang
Hill Country AB

Learning Relational Sum-Product Networks
Anirudh Nath, Pedro Domingos
Hill Country AB

Are Features Equally Representative? A Feature-Centric Recommendation
Chenzi Zhang, Ke Wang, Ziyi Luo, Qinneng Xu, Jianliang Sun, Hongkun Yu
Hill Country AB

Pearl’s Causality in a Logical Setting
Alexander Boehman, Vladimir Lifschitz
Hill Country CD

Automatic Configuration of Sequential Planning
Portfolios
Jendrik Seipp, Silvan Sievers, Malte Helmert, Frank Hutter
Hill Country CD

Reusing Previously Found A* Paths for Fast Goal-Directed Navigation in Dynamic Terrain
Carlos Hernández, Roberto Asín, Jorge A. Baier
Hill Country CD

Multi-Agent Pathfinding as a Combinatorial Auction
Ofra Amir, Guni Sharon, Roni Stern
Big Bend Ballroom

When Suboptimal Rules
Avshalom Elmalech, David Sarne, Avi Rosenfeld, Eden Shalom Erez
Big Bend Ballroom

Strategy-Proof and Efficient Kidney Exchange Using a Credit Mechanism
Chen Hajaj, John P. Dickerson, Avinatan Hassidim, Tuomas Sandholm, David Sarne
Big Bend Ballroom

On Fairness in Decision-Making under Uncertainty: Definitions, Computation, and Comparison
Chongjie Zhang, Julie A. Shah
Big Bend Ballroom

Student Abstract and Poster Program
Wednesday and Thursday, January 28–29
Poster Ads: Texas 1, Second 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 will present poster
**AAAI-15 Open House**

**Monday, January 26**
Zilker Ballroom 1-3, First Level

The 2015 AAAI Open House will be held on Monday, January 26 in the Zilker Ballroom. There is no cost to attend this event, and it is open to the public. During the open house there will be demos and posters on many areas and topics including robotics, games, agents, and many others. Speakers Moshe Vardi and Stuart Russell will address the social consequences of AI. We look forward to seeing you there with your friends and family.

For up-to-date open house information, see movingai.com/AAAI15/openhouse.html

**Open House Exhibits**
Exhibits will be held in Zilker 1–2 and Foyer, from 9:00 AM – 5:30 PM. Open House Exhibits will include Robotics exhibits, the RoboCup Exhibition, Virtual Agents Demos, and the posters and demos (including the Games Showcase) listed below.

**Open House Invited Presentations**

Open House Invited Presentations will be held in Zilker 3
The Future of (Artificial) Intelligence
Stuart Russell (University of California, Berkeley)
1:00 pm
The news media in recent months have been full of dire warnings about the risk that AI poses to the human race, coming from well-known figures such as Stephen Hawking and Elon Musk. Should we be concerned? If so, what can we do about it?

If Machines Are Capable of Doing Almost Any Work Humans Can Do, What Will Humans Do?
Moshe Vardi (Rice University)
4:30 pm
Over the past 15 years artificial intelligence (AI) has made remarkable progress. While AI has been proven to be much more difficult than believed by its early pioneers, its inexorable progress over the past 50 years suggests that H. Simon was probably right when he wrote in 1956 “machines will be capable … of doing any work a man can do.” I do not expect this to happen in the very near future, but I do believe that by 2045 machines will be able to do a very significant fraction of the work that humans can do. The following question, therefore, seems to be of paramount importance. If machines are capable of doing almost any work humans can do, what will humans do?

**Open House Poster Presenters**

A Multi-Pass Sieve for Name Normalization
Jennifer D'Souza, University of Texas at Dallas

A Multivariate Timeseries Modeling Approach to Severity of Illness Assessment and Forecasting in ICU with Sparse, Heterogeneous Clinical Data
Marsyeh Ghahsami, Tristan Naumann, and Mengling Feng, MIT

Leveraging Multi-modalities for Egocentric Activity Recognition
Peng-Ju, Hsieh, National Taiwan University

Goal Recognition Design
Sarah Keren and Avigdor Gal, Technion - Israel Institute of Technology

Building a Professor Recommendation System Using Clustering
Mackenzie Leake, Scripps College

Fractal Reasoning
Keith McGregor, Georgia Institute of Technology

Borrowing from Biology: Using Genetic Algorithms and Hierarchical Genetic Algorithms to Create Technology
Jennifer Seitzer, Rollins College

Incentivizing Users for Balancing Bike Sharing Systems
Marco Santoni, ElectricFeel

An Agent-Based Model of the Emergence and Transmission of a Language System for the Expression of Logical Combinations
Josefina Sierra-Santibanez, Technical University of Catalonia

Going Beyond Literal Command-Based Instructions: Extending Robotic Natural Language Interaction Capabilities
Tom Williams, Tufts University

**Open House Demo Presenters**

Plan, Repair, Execute, Explain - How Planning Helps to Assemble your Home Theater
Pascal Berchen, UIm University

Computer Playing Poker (Game Showcase)
Michael Bowling, Rob Holte, Nolan Bard, Neil Burch, Michael Johanson, Trevor Davis, and Dustin Morrill, University of Alberta

Cogsketch: Sketch Understanding for Cognitive Science and Education
Maria Chang, Northwestern University

Samsung Tune: A Scalable Song Recommender System
Maryam Esmaeili, Samsung Research America

Angry Birds AI and Snap! (Game Showcase)
Qiaoyu Ge and Jochen Renz, Australian National University

MoHex, A Strong Hex Player (Game Showcase)
Ryan Hayward, University of Alberta

KU Leuven Innovation Lab for High School Students
Wannes Meert, Guy Van den Broeck, and Jan Van Haaren, KU Leuven

2012 BotPrize Champion: Human-like Bot for Unreal Tournament (Game Showcase)
Jacob Schrum, Southwestern University and Risto Miikkulainen, The University of Texas at Austin

Classifying Guitar Tab Difficulty
Ankit Tandon, University of Texas at Austin

We Are Watson Labs
Dan Tecuci and Rob Turnkett, IBM Watson

Fittle, A Mobile Health & Wellness App
Michael Youngblood, Palo Alto Research Center (PARC, a Xerox company)

Fuego Go Program (Game Showcase)
Yeapin Zhang, University of Alberta

RoboCup at AAAI-15
See page 11 for details.

**AAAI Fellow / Student Lunches**

**Wednesday and Thursday, January 26–29**
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 Texas Ballroom. Students should meet their designated Fellow in on-site registration on their assigned day.

**Games Night**

**Wednesday, January 28, 8:15 – 10:00 PM**
Foothills II, 17th Floor

Come spend an evening playing games with other AAAI participants at the third annual AAAI Games Night. There will be organized AI-themed games, including a AAAI version of The Price is Right! with a chance to win a variety of prizes! Bring your own games to play afterwards.

ads during the lunch breaks on Wednesday and Thursday, January 28–29. They will present their posters in the evening Poster / Demo Session on the corresponding day. For the schedule of student poster presentations, please see the schedule on pages 15-28. Information about the Poster / Demos Sessions is available on page 5 and in the accompanying insert.
Robots: Science and Systems 2014 Presentations

Multi-Heuristics A∗
Sandip Aine, Siddharth Swaminathan, Venkatraman Narayanan, Victor Hwang, Maxim Likhachev

Active Reward Learning
Christian Daniel, Malte Viering, Jan Metz, Oliver Kremer, Jan Peters

Open-Vocabulary Object Retrieval
Sergio Guadarrama, Erik Rodner, Kate Saenko, Ning Zhang, Ryan Farrell, Jeff Donahue, Trevor Darrell

Fully Decentralized Task Swaps with Optimized Local Searching
Lantao Liu, Nathan Michael, Dylan Shell

Tell Me Dave: Context-Sensitive Grounding of Natural Language to Manipulation Instructions
Dipendra Kuma R Misra, Jayong Sung, Kevin Lee, Ashutosh Saxena

Learning Articulated Motions from Visual Demonstration
JoSEP Pillai, Matthew Walter, Seth Teller

Asking for Help Using Inverse Semantics
Stefanie Tellex, Ross Knepper, Adrian Li, Daniela Rus, Nicholas Roy

Learning to Locate from Demonstrated Searches
Paul Vernaza, Anthony Stentz

Correct High-level Robot Behavior in Environments with Unexpected Events
Kai Weng Wong, Rudiger Ehlers, Hadas Kress-Gazit

Hierarchical Semantic Labeling for Task-Relevant RGB-D Perception
Chenxia Wu, Ian Lenz, Ashutosh Saxena

Robotic Events

AAAI-15 showcases robotics in a variety of programs, including special technical tracks, student robotics paper presentations, Robotics: Science and Systems Early Career Spotlight talks, the Shakey Celebration (see page 6), an exhibition of robotics research from academia and industry, including a RoboCup exhibition match, and a “best robot video” award. AAAI wishes to thank AI Journal, the National Science Foundation, and the NSERC Canadian Field Robotics Network (NCFRN), the IEEE Robotics and Automation Society (RAS), and the RoboCup Federation for their generous support of these events.
Competition, Games Showcase, Job Market Electronic Bulletin Board

AI Video Competition

www.aaaivideos.org
Video Loop: Monday—Thursday, January 26–29
Texas Ballroom Foyer
Awards Ceremony: Thursday, January 29, 1:20 – 1:50 PM
Zilker Ballroom

The Ninth AI Video Competition 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 co-chairs Sabine Hauert (University of Bristol, UK) and Mauro Birattari (Université Libre de Bruxelles, Belgium). 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 AI Journal Review Board for its donation and the Bristol Robotics Laboratory for help with the manufacturing of the awards.

Games Showcase

Monday, January 26 9:00 AM – 6:00 PM
(Open House)
Wednesday, January 28 6:30 – 8:00 PM
Thursday, January 29 6:45 – 8:15 PM
Zilker Ballroom

The Games Showcase will provide a glimpse into the latest research in game-playing programs. The last 10 years has seen significant shifts in game research, with new research in games of imperfect information, as well as research in modern video games. Furthermore, new search techniques have brought significant progress in games like Go, for which previous techniques did not perform well. Come by the showcase to see a mix of games and learn about the latest research progress.

Games Showcase Demonstrations

The Games Showcase will be available during the Open House on Monday and during Wednesday and Thursday evening poster sessions. The games are scheduled in 30-minute slots each evening.

Poker Program

Michael Bowling, University of Alberta
January 28, 7:00 – 7:30 PM
January 29, 6:45 – 7:15 PM

Angry Birds AI and Snap!

Xiaoyu Ge, Australian National University
January 28, 6:30 – 7:00 PM
January 29, 7:45 – 8:15 PM

MoHex (Hex) and Fuego (Go)

Ryan Hayward, University of Alberta
January 28, 6:30 – 7:00 PM
January 29, 7:15 – 7:45 PM

2012 BotPrize Champion: Humanlike Bot for Unreal Tournament

Jacob Schrum, Southern University and Risto Miikkulainen, The University of Texas at Austin
January 28, 7:30 – 8:00 PM
January 29, 6:45 – 7:15 PM

Baidu Knowledge Graph (BKG)

We built BKG as the world’s largest structured knowledge graph. It powers various product lines across Baidu, including web pages, user queries, documents, feeds etc. BKG recognizes 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 Journal (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)

aaai.org/aitopics
The Premier Source of Information about AI. Stop by the AI Topics 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 AI Topics can provide for your classroom instruction or term papers. Suggest improvements. Review our list of classic papers to add your favorites.

Baidu (Sponsor/Exhibitor)

www.baidu.com
Contacts: Dawei Peng and Daren Li
The Baidu Mobile App. We’ve just released the latest version—5.5—of our flagship app, Mobile Baidu. In addition to traditional text and speech-based search, users can tap the small camera icon in the search bar for to activate a wide range of visual search capabilities: similar image search, product search, flower identification, pet recognition, facial recognition and much more.

Baidu Knowledge Graph (BKG). We built BKG with billions of interconnected entities by extracting information from various sources, including web pages, user queries, documents, feeds etc. BKG powers various product lines across Baidu, includ-
part to ISI’s standing. AI research areas include natural language processing, information integration, complex networks, human behavior, semantic web, and knowledge technologies.

University of Texas at Austin (In cooperation)
www.cs.utexas.edu/
Contact: Bruce Porter, Department Chair
(chairs.cs.utexas.edu)
The Department of Computer Science is in the heart of the 350-acre campus of the University of Texas. Housed in the beautiful new Bill & Melinda Gates Computer Science Complex, the Department includes 45 faculty and 200 Ph.D. students and post-docs conducting research across the breadth of computer science.

Yahoo Labs (Sponsor)
labs.yahoo.com
YahooLabs@yahoo-inc.com
Yahoo Labs serves as Yahoo’s most forward-looking thinkers, providing deep technical expertise on critical scientific and technical topics. Yahoo Labs is the company’s incubator for bold scientific experimentation. We believe that research is critical to creating delightful, personalized experiences for users and enhancing value for advertisers. At Yahoo Labs: We cover the spectrum from use-inspired basic research to applied science; We anticipate and invent technology-based opportunities; We anticipate and design for social and market trends; We explore fundamental computational, social, and economic phenomena; We participate in the international scientific research community; We work extremely closely with our software development organizations; We work closely with the world’s best universities.

General Information

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

Admission
Each conference attendee will receive a name badge upon registration. This badge is required for admittance to the technical, tutorial, IAAI, and workshop programs, as well as all social events. Smoking is not allowed in any of the technical, poster/demo, tutorial, workshop, or IAAI sessions.

Banking
An ATM is located in the hotel lobby, just beside the Front Desk.

Business Center/Shipping
The Hyatt Business Center is located on the 2nd floor, just past the entrance to the Zilker skywalk. For package handling please see the hotel Concierge.

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 Job Market Bulletin Board is available on page 12.

Hotel Dining/Coffee
A Starbucks is located on the 1st floor of the Hyatt, to the immediate right of the front entrance of the hotel. The Marker 10 Spirits and Cuisine Lounge features cocktails, casual dining, lake view, and music. The SWB-Southwest Bistro on the second level serves breakfast, lunch and dinner.
For restaurants near the Hyatt, please visit austin.hyatt.com/en/hotel/dining.html

Hotel Reservations
For information regarding hotel reservations, please contact the Hyatt Regency Austin directly at 1-888-421-1442.

Internet Access
Wireless Internet access codes for guestrooms will be provided at check in. WiFi access is complimentary in a lobby spaces using the code: Free2.
AAAI-15 attendees will be provided with access codes for the meeting areas onsite.

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

Parking
Overnight self-parking is available at $19 per day with unlimited guest access (guests only). Daily self-parking has hourly rates of 0-4 hours at $6.00, 4-7 hours at $13.00, and 7+ hours at $19.00. Daily valet parking is $15.00 per day.

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 online in the registration area.

Transportation

Local Transit
Single ride is only $1. Day pass is $2. Get around town using Capital Metro’s convenient app, Buy passes, plan trips, and get real-time arrical information on the go. www.capmetro.org/app

Airport Flyer Bus Service
Austin’s Cap Metro offers direct airport bus service via a dedicated route that travels between the airport and downtown, the Capitol and The University of Texas. $1.50 one way. Call: 512-474-1200, Toll-free: 800-474-1201

Airport Super Shuttle
Transfer from the hotel to the airport is $14 per person. Advance pickup arrangements must be secured to travel from the hotel to the airport. Please call 512-258-3826 or contact the concierge to arrange a pickup.

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

Disclaimer
In offering the Hyatt Regency Austin, the University of Texas at Austin, Texas Exposition Services, R&R Limousine and Bus, 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-15/IAAI-15 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.
Tuesday January 27 — 8:30 AM – 1:20 PM

TEXAS H-III
Computational Sustainability and AI 1 Talks
Energy Disaggregation via Learning `Powerlets' and Sparse Coding
Ehsan Elmohammadi, Shankar Sastry
Power System Restoration with Transient Stability
Hassan Hajihasanpour, Terrence W.K. Mak, Pascal Van Hentenryck
Resilient Upgrade of Electrical Distribution Grids
Emre Yamanoglu, Russell Bent, Scott Buckbauer
Towards Optimal Solar Tracking: A Dynamic Programming Approach
Ahmadnasir Arts Panagopoulou, Georgios Chalkiadakis, Nicholas R. Jennings
Learning Large-Scale Dynamic Discrete Choice Models of Spatio-Temporal Preferences with Application to Migratory Pastoralism in East Africa
Stefano Ermon, Yesheng Xue, Russell Toff, Bistra Dilkina, Richard Bernstein, Theodora Damourides, Patrick Clark, Steve DeBartolo, Andrew Dudew, Christopher Barrett, Carla P. Gomes
Poster Ads
Convergent Plans for Large-Scale Evacuations
Caroline Evine, Victor Pillar, Pascal Van Hentenryck
Predictor Optimization of Transportation Networks
Hermann Schichl, Metin Sevil
SmartShift: Expanded Load Shifting Incentive Mechanism for Risk-Averse Consumers
Bochaon Shen, Balakrishnan Narayanaswamy, Rani Sundaram
Best-Response Planning of Thermoelectrically Controlled Loads under Power Constraints
Fritz de Nijs, Matthijs T. J. Spaan, Matthijs M. De Weerdt
Influence-Driven Model for Time Series Predictions from Partial Observations
Saima Aman, Charalampos Cheinis, Viktor K. Prasanna
A Nonparametric Online Model for Air Quality Prediction
Vitor Gaszilino, Fabio Ramos
Cognitive Social Learners: An Architecture for Modeling Normative Behavior
Rahmatullah Behzadi, Awad Mohammad Ali, Gita Sukthankar

TEXAS V–VI
Knowledge Representation & Reasoning 1 Talks
The Relative Expressiveness of Abstract Argumentation and Logic Programming
Hannes Strass
Grounded Fixpoints
Bart Bogaerts, Joost Vennekens, Marc Denecker
Exploiting Parallelism for Hard Problems in Abstract Argumentation
Federico Cerutti, Ilia Tadiczmadzi, Mauro Vallati, Sotiris Bakatsis, Maximilian Gimacon, Gregori Antoniou
On Computing Explanations in Argumentation
Xiayi Fan, Francesca Toni
LARS: A Logic-Based Framework for Analyzing Reasoning over Streams
Harold Beck, Minh Dau-Tran, Thomas Eiter, Michael Fink
Logic Programming in Assumption-Based Argumentation Revised — Semantics and Graphical Representation
Claudia Schulz, Francesca Toni
Poster Ads
On Elementary Loops and Proper Loops for Disjunctive Logic Programs
Juamiin Ji, Hai Wan, Peng Xiao
Splitting a Logic Program Revised
Juamiin Ji, Hai Wan, Ziwei Huo, Zhengfeng Yuan
HIll COUNTRY AB
Planning and Scheduling 1 Talks
Better Be Lucky than Good: Exceeding Expectations in MDP Evaluation
Thomas Keller, Florian Geijer
Factored MCTS for Large Scale Stochastic Planning
Hao Cao, Rong Khaurden, Alan Fern, Prasad Tadepalli
Hierarchical Monte-Carlo Planning
Ng-Anh Van, Marc Toussaint
Efficient Bounds in Heuristic Search Algorithms for Stochastic Shortest Path Problems
Eric A. Hansen, Ibrahim Abdoulahi
Preference Planning for Markov Decision Processes
Melton Li, Zhikan She, Andrea Turunen, Lijun Zhang
Information Gathering and Reward Exploitation of Subgoals for POMDPs
Hang Ma, Joelle Pineau
Poster Ads
Solving Uncertain MDPs with Objectives that Are Separable over Instantiations of Model Uncertainty
Youyi Aduahyak, Pradeep Varakantham, Asrar Ahmed, Patrick Jaillet
Representation Discovery for DPMDs Using Bisimulation Metrics
Sherry Shanmugam, Ghoreeh Comisi, Prakash Panangaden, Dona Precup
Real-Time Temporal Dynamic Programming for Hybrid MDPs
Lari G. Viana, Leilane N. De Barros, Scott Sanner
Agnostic System Identification for Monte Carlo Planning
Erik Talvitie
Improving Exploration in UCT Using Local Manifolds
Stream Surenvash, Erik Talvitie, Michael Bowling
BIG BEND
Game Theory & Economic Paradigms 1 Talks
Conventional Machine Learning for Social Choice
John A. Doucette, Kate Larson, Robin Cohen
Fully Proportional Representation with Approval Ballots: Approximating the MaxCover Problem with Bounded Frequencies in FPT Time
Piotr Skowron, Piotr Faliszewski
Justified Representation in Approval-Based Committee Voting
Hara, Max Brill, Vincent Conitzer, Edith Elkind, Rupert Freeman, Toby Walsh
A Complexity Approach for Core-Selecting Exchange with Multiple Indivisible Goods under Lexicographic Preferences
Etsushi Fujita, Julien Lema, Akhiija Sonoda, Taisi Todo, Makoto Yokoo

AAAI Talks = 15 minutes
AAAI Poster Ads = 2 minutes
Senior Member Summary Talks = 20 minutes
Senior Member Blue Sky Talks = 15 minutes
What’s Hot Talks = 15 minutes
Robotics/RSS Talks = 10 minutes
IAAI Deployed Talks = 30 minutes
IAAI Emerging Talks = 20 minutes
IAAI Challenge Talks = 10 + 10 Q&A
Committee Voting
Hara, Max Brill, Vincent Conitzer, Edith Elkind, Rupert Freeman, Toby Walsh
A Complexity Approach for Core-Selecting Exchange with Multiple Indivisible Goods under Lexicographic Preferences
Etsushi Fujita, Julien Lema, Akhiija Sonoda, Taisi Todo, Makoto Yokoo

Voting Rules As Error-Correcting Codes
Arieli D. Procaccia, Nisarg Shah, Yuri Zick
Egalitarian Collective Decision Making with Under Qualitative Possibilities
Principle and Characterisation
Natha Ben Amor, Violeta Espadgh, Helene Filure
Poster Ads
Plurality Voting under Uncertainty
Roshel Meir
On the Convergence of Iterative Voting
How Restrictive Should Restricted Dynamics Be?
Svetlana Obratsova, Evangelos Markakis, Maria Polukarina, Znene Rahnovich, Nicholas R. Jennings
Approximating Optimal Social Choice under Metric Preferences
Elliot Ahmedshek, Onkar Bhardwaj, John Post
Elections with Few Voters: Candidate Control Can Be Easy
Jehuba Chen, Pratek Faliszewski, Rolf Niedermeier, Nimrod Talmon
Envelope-Free Cake-Cutting in Two Dimensions
Erel Segal-Halevi, Arvindan Hassidim, Yonatan Aumann

HILL COUNTRY FUNDING INFORMATION SESSION
Emerging: Day-Ahead Hail Prediction Integrating Machine Learning with Storm-Scale Numerical Weather Models
David John Gagne II, Amy McGovern, Jared Bregeste, Michael Congoll, James Correia Jr., Ming Xue
Emerging: Capturing Human Route Preferences from Track Information: New Results
Johnathan Gohde, Mark Berry, Hazel Shanklestein, Steve Johnston
Emerging: A Robust and Extensible Tool for Data Integration Using Data Type Models
Andres Quiroz, Eric Huang, Lina Ceriani
Emerging: Maestros: An Intelligent Educational Sketching Tool for Learning Music Theory
Paul Tsui, Laura Barrette, Tracy Hammond

SCHEDULE: TUESDAY MORNING 15

10:10 – 11:50

TEXAS I
Machine Learning 1 Talks
Easily Accessible Paper: On Machine Learning towards Predictive Sales Pipeline Analytics
Junichi Yan, Chao Zhang, Hongyan Zhi, Min Gong, Changhao Sun, Jin Huang, Stephen Chu, Xiaohang Yang
Forecasting Collector Road Speeds under High Percentage of Missing Data
Xin Xin, Chunwei Lu, Takashi Wasan, Heng Huang
Identifying At-Risk Students in Massive Open Online Courses
Jiazhenn He, James Bailey, Benjamin I. P. RUNDLE, Rui Zhang
Tensor-Based Learning for Predicting Stock Movements
Qing Li, LiLing Jiang, Peng Li, Hsichun Chen
Automatic Assessment of OCR Quality in Historical Documents
Anand Gupta, Ricardo Gutierrez-Osuna, Matthew Christy, Boris Capitanu, Loretta Auriv, Liz Grimbach, Richard Faruta, Laura Mandelli
 Burst Time Prediction in Cascades
Senzhang Wang, Zhao Yan, Xia Hu, Philip S. Yu, Zhoujian Li
Poster Ads
Learning to Hash on Structured Data
Qifan Wang, Luo Si, Bin Shen
Generalized Singular Value Thresholding
Carey Lu, Changbing Zhu, Chunyan Xu, Xiaicheng Yan, Zhaohun Lin
A Sparse Combined Regression Classification Formula for Learning a Physiological Alternative to Clinical Post-Traumatic Stress Disorder Scores
Sarah M. Brown, Andrea Webb, Rami S. Mandell
An SVD and Derivative Kernel Approach to Learning from Geometric Data
Eric Wong, L. Zade Koller
Efficient Benchmarking of Hyperparameter Optimizers via Surrogates
Katharina Eygenpeperg, Frank Hutter, Holger H. Hoos, Kevin Leyton-Brown

Funding Information Session
AAAI-15: Machine Learning, Information Fusion, and HCI
Emerging: Day-Ahead Hail Prediction Integrating Machine Learning with Storm-Scale Numerical Weather Models
David John Gagne II, Amy McGovern, Jared Bregeste, Michael Congoll, James Correia Jr., Ming Xue
Emerging: Capturing Human Route Preferences from Track Information: New Results
Johnathan Gohde, Mark Berry, Hazel Shanklestein, Steve Johnston
Emerging: A Robust and Extensible Tool for Data Integration Using Data Type Models
Andres Quiroz, Eric Huang, Lina Ceriani
Emerging: Maestros: An Intelligent Educational Sketching Tool for Learning Music Theory
Paul Tsui, Laura Barrette, Tracy Hammond

Lunch Break
11:50 – 1:20
Tuesday January 27 — 1:20 PM – 3:30 PM

1:20 - 1:50

ZILKER BALLROOM
Senior Member Blue Sky Award Talks I
Machine Teaching: An Inverse Problem to Machine Learning and an Approach toward Optimal Education
Xiaoou Zou
Emerging Architectures for Global System Science
Michela Milano, Pascal Van Hentenryck

TEXAS BALLROOM I
What’s Hot Talks I
What’s Hot in the General Game Playing Competition
Michael Genesereth
What’s Hot in the RobotCom@Home Competition
Sven Wachsmuth

TEXAS BALLROOM II-III
What’s Hot Talks 2
What’s Hot in Intelligent Robots and Systems (IROS)
Lynne Parker
What’s Hot in Computer Vision and Pattern Recognition (CVPR)
Rene Vidal

1:55 - 3:10

TEXAS I
Machine Learning 2
 Talks
Learning Multi-Level Task Groups in Multi-Task Learning
Lei Han, Yu Zhang
Active Manifold Learning via Gershgorin Circle Guided Sample Selection
Hongxing Xu, Hongyan Zha, Ren-Cang Li, Mark A. Davenport
Integrating Features and Similarities: Flexible Models for Heterogeneous Multiview Data
Wenzhou Lian, Piyush Rai, Esther Salazar, Lawrence Carin
Online Boosting Algorithms for Anytime Transfer and Multitask Learning
Boyu Wang, Jiefei Pineau
Poster Ads
Effectively Predicting Whether and When a Topic Will Become Relevant in a Social Network
Weiwu Liu, Zhi-Hong Deng, Xiuxue Gong, Frank Jiang, Ivor W. Tsang
On Information Coverage for Location Category Based Point-of-Interest Recommendation
Xiaofeng Chen, Yifeng Zeng, Gao Cong, Shengqin Qin, Yingliang Yang, Yuanqian Dai
Will You ‘Reconsume’ the Next Past? Fast Prediction on Short-Term Recomposition Behaviors
Jun Chen, Chaokun Wang, Jianmin Wang
Kernel Density Estimation for Text-Based Geolocation
Mas Hulden, Mikka Silfverberg, Jeroen Francom

TEXAS V
Knowledge Representation & Reasoning 2
 Talks
Easily Accessible Paper: Pearl’s Causality in a Logical Setting
Alexander Boehm, Vadimir Lifschitz
Projection in the Epistemic Situation Calculus with Belief Conditionals
Christoph Schwering, Gerhard Lakemeyer
An Abstract View on Modularity in Knowledge Representation
Yuliya Lekker, Miroslav Truszczynski
Belief Revision Games
Nicolas Schwind, Katsumi Inoue, Gautam Bourgine, Sebastian Konigsepp, Pierre Marquis
Poster Ads
Action Language Bc+: Preliminary Report
Joseph Babb, Jodyung Lee
XPaths for DL Ontologies
Egor V. Kastyrev, Juan L. Reutter, Danmpay Vigoc

Ontology Module Extraction via Datalog Reasoning
Ana Armas Romero, Mark Kaminski, Bernardo Guescini Grau, Ian Horrocks
Belief Revision with General Epistemic States
Hua Meng, Hui Kou, Sanjung Li
HILL COUNTRY AB
Planning and Scheduling 2
Talks
This Time the Robot Settles for a Cost: A Quantitative Approach to Temporal Logic Planning with Partial Satisfaction
Morteza Lahijanian, Staal Almoguer, Dorr Fred, Lydia E. Kavraki, Moshe Y. Vardi
Strong Temporal Planning with Uncontrollable Durations: A State-Space Approach
Alessandro Cominetti, Andrea Michel, Marco Roveri
Robustness in Probabilistic Temporal Planning
Poster Ads
Resolving Over-Constrained Probabilistic Temporal Problems through Chance Constraint Relaxation
Peng Yu, Cheng Fang, Brian Williams
thuron: A Divide and Conquer Temporal Planner
David Wang, Brian Williams
Optimal Cost Almost-Sure Reachability in POMDPs
Krisnendu Chatterjee, Martin Chenel, Raghab Gupta, Ayush Kanodia
SMT-Based Nonlinear PDDL+ Planning
Daniel Bryce, Sicau Gao, David Maulin, Robert Goldman
Crowdsourced Action-Model Acquisition for Planning
Hanko Hanika Zhou
Exploiting Submodular Value Function for Faster Dynamic Sensor Selection
Yaak Sattos, Shommon Whiteson, Frans A. Oliehoek
Transition Constraints for Parallel Planning
Nina Ghahbari Ghoshchu, Majid Nemat, M. A. Hakan Newton, Abdal Sattar
Multi-Objective MDPs with Conditional Lexicographic Reward Preferences
Kyle Hellins Wray, Shlomo Zilberstein, Abdallah Mousaoud
Discretization of Temporal Models with Application to Planning with SMT
Juari Rintanen
Chance-Constrained Scheduling via Conflict-Directed Risk Allocation
Andrew J. Wang, Brian C. Williams
Learning Hybrid Models with Guarded Transitions
Pedro Santana, Spencer Lane, Eric Timmons, Brian Williams, Carlos Forster
Planning over Multi-Agent Epistemic States: A Classical Planning Approach
Christian Mueke, Vasile Bel, Paolo Falli, Sheila Mcmurl, Tim Miller, Adrian B. Pearce, Liz Sonenberg
BIG BEND
Natural Language Processing 1
 Talks
Mining Query Subtopics from Questions in Community Question Answering
Yu Wu, Wei Wu, Zhouwn Li, Ming Zhou
Contrastive Unsupervised Word Alignment with Non-Local Features
Yang Liu, Maosong Sun
The Utility of Text: The Case of Amicus Briefs and the Supreme Court
Yuanqiang Sun, Bryan R. Routledge, Noah A. Smith
Easy Accessible Paper: Multi-Document Summarization Based on Two-Level Sparse Representation Model
He Liu, Hongfang Yu, Zhi-Hong Deng
Poster Ads
Ranking with Recursive Neural Networks and Its Application to Multi-Document Summarization
Ziqing Cao, Furu Wei, Li Dong, Sujuan Li, Ming Zhou
Question/Answer Matching for COQA System via Combining Lexical and Sequential Information
Yikang Shen, Wenge Bong, Zhixue Sun, Yuanshun Dai, Zheng Xiang
Towards Phrase-Based Language Model in Statistical Machine Translation
Sujuan Zhang, Shuyue Liu, Ma Li, Ming Zhou, Cheqiong Zong
Automatically Creating a Large Number of New Bilingual Dictionaries
Khang Nhat Lam, Tera Al Tarouti, Jugal Kalia
A Family of Latent Variable Convex Relaxations for IBM Model 2
Andrei Simion, Michael Collins, Clifford Stein
Extracting Adverse Drug Reactions from Social Media
Andrew Yates, Nazih Gharabian, Ophir Frieder

TEXAS VII
Robotics: Science and Systems 2014 Presentations (RSS) 1
Correct High-level Robot Behavior in Environments with Unexpected Events
Kai-Weng Weng, Kaj Dihlberg, Hadas Kress-Gazit
Hierarchical Semantic Labeling for Task Relevant RGB-D Perception
Chensha Wu, Ian Lens, Athanassios Saxena
Open-Vocabulary Object Retrieval
Sergiu Guadarrama, Erik Rodner, Kate Saenko, Ning Zhang, Ryan Farrell, Jeff Donahue, Trevor Darrell
Active Reward Learning
Christian Danil, Malte Vieiring, Jan Metz, Oliver Knoer, Jan Peters
Multi-Heuristics A*
Sandeep Ame, Siddharth Swaminathan, Venkatakrishnan Narayanan, Vincent Kwong, Maxim Likhachev
HILL COUNTRY CD
IAAI-15: Semantic Web, Knowledge Based Systems, and Ontologies
Emerging: Leveraging Ontologies to Improve Model Generalization Automatically with Online Data Sources
SatishJanapraganti, Dylan A. Shell
Emerging: SKILL: A System for Skill Identification and Normalization
Meng Zhou, Faizan Janw, Ferrol Jacob, Matt McNair
Emerging: HACKAR: Helpful Advice for Code Knowledge and Attack Resistance
Egur Katz, Mark Burstein, L. Benton, Daniel Bryce, Jordan Thayer, Steve McCoy

3:10 - 3:30
Coffee Break
Learning Entity and Relation Embeddings for Knowledge Graph Completion
Yankai Lin, Zhiyuan Liu, Maosong Sun, Yang Li, Xu Zhao
Predicting Peer-to-Peer Loan Rates Using Bayesian Non-Linear Regression
Zsolt Biró, Trevor Cohn
An EMBC-Based Approach to Selecting Types for Entity Filtering
Jowei Ding, Wentao Ding, Wei Liu, Yuchao Qiu
Relating Romanized Comments to News Articles by Inferring Multi-Glyphic Topical Correspondence
Guohua Thulpadi, Minral Kanti Das, Trapez Bansal, Chiranjib Bhattacharyya

TEXAS V-I
Knowledge Representation & Reasoning 3
Talks
aspirin: Customizing Answer Set Preferences without a Headache
Gerhard Bresle, James Delgrande, Javier Romero, Torsten Schaub
SMT-Based Validation of Timed Failure Propagation Graphs
Marco Bozzano, Alessandro Cometti, Marco Garro, Andrea Michel
Interactive Query-Based Debugging of ASP Programs
Konstantin Shchekotykhin
Stable Model Counting and Its Application in Probabilistic Logic Programming
Rohan Abdul Aziz, Geoffrey Chu, Christian Muise, Peter J. Stuckey
Poster Ads
Exploring the KD45, Property of a Kropke Model after the Execution of an Action Sequence
Teaclud Son, Ercin Pontelli, Chitta Baral, Gregory Gelfond
Parallelized Hitting Set Computation for Model-Based Diagnosis
Dietmar Jannach, Thomas Schmiltz, Konstantyn Shchekotykhin
Verifying and Synthesizing Multi-Agent Systems against One-Goal Strategy Logic Specifications
Petr Cermák, Aleixo Limuscio, Anjelo Marano
Tractable Interval Temporal Propositional and Description Logics
Alejandro Artale, Roman Kontchakov, Vladislav Rybakov, Michael Zakharyaschev
Towards Tractable and Practical Abduction over Inconsistent Description Logic Ontologies
Jiajue Du, Kewen Wang, Yi-Dong Shen

HILL COUNTRY AB
Multiagent Systems 1
Talks
Position Assignment on an Enterprising Agent Team
Han Yu, Chunyan Miao, Zhipu Shen, Cyril Leung, Yaping Chen, Qing Yang
Easily Accessible Paper: Multi-Agent Pathfinding as a Combinatorial Auction
Ofer Amir, Guni Sharon, Roni Stern
Easily Accessible Paper: On Fairness in Decision Making under Uncertainty: Definitions, Computation, and Comparison
Chongqiao Zhang, Julie A. Shah
Finding a Collective Set of Items: From Proportional Multipreference to Group Recommendation
Poite Skowron, Piotr Fuliszczuk, Jérôme Lang
Poster Ads
Cupid: Commitments in Relational Algebra
Amir K. Chopra, Mani Madrakar, P. Singh
Verification of Relational Multiagent Systems with Data Types
Diego Calvanese, Marco Montali, Giorgio DeLuca

HILL COUNTRY CD
Machine Learning 4
Talks
An Adaptive Gradient Method for Online AUC Maximization
Yi Dong, Peilin Zhao, Steven C.H. Hoi, Yew Soon Ong
Kernelized Online Imbalanced Learning with Fixed Budgets
Junjie Hu, Haiqin Yang, Irwin King, Michael L. Lyu, Anthony Man-Choo So
High-Performance Distributed ML at Scale through Parameter Server Consistency Models
Wei Dai, Abhinomar Kumar, Jinsang Wei, Qiong Ho, Garth Gibson, Eric P. Xing
Poster Ads
Unidimensional Clustering of Discrete Data Using Latent Tree Models
April Hua Liu, Leonard K. M. Poos, Kevin L. Zhang
SoF: Soft-Cluster Matrix Factorization for Probabilistic Clustering
Han Zhao, Pascal Poupart, Yongfang Zhang, Martin Lysy
Robust Subspace Clustering via Thresholding Ridge Regression
Wei Peng, Zhang Yi, Huijuan Tang
Detecting and Tracking Concept Class Drift and Emergence in Non-Stationary Fast Data Streams
Brandon S. Parker, Latifur Khan
10,000+ Times Accelerated Robust Subset Selection (ARSS)
Feynun Zhu, Bin Fan, Xianlu Zhang, Yong Wang, Shiming Xiang, Chunhong Pan
Constrained NMF-Based Multi-View Clustering on Unmapped Data
Xunchao Zhang, Linlin Zong, Xinyue Liu, Hong Yu
The Quee Method: Handling Delay, Heuristics, Prior Data, and Evaluation in Bandits
Travis Mandel, Yan-Et Liu, Emma Brandl, Zoran Popovic
Maximin Separation Probability Clustering
Guo Huang, Jianwen Zhang, Shijie Song, Zheng Chen
Learning Robust Locality Preserving Projection via p-Order Minimization
Hua Wang, Feiping Nie, Heng Huang
Coupled Iterative Independent Attribute Analysis on Mixed Data
Can Wang, Chi-Hung Chi, Wei Zhou, Raymond Wong
Online Bandit Learning for a Special Class of Non-Convex Losses
Liyan Zhang, Fantao Yang, Rong Jin, Zhi-Hua Zhou
Budgeted Prediction with Expert Advice
Kareem Amin, Satyen Kale, Gerald Tesauro, Deepak Tandon
Large-Scale Multi-View Spectral Clustering via Bipartite Graphs
Ye-qing Li, Feiping Nie, Heng Huang, Junchao Huang

A Convex Formulation for Spectral Shrunken Clustering
Xiaojun Chang, Feiping Nie, Zhiyang Ma, Yi Yang, Xuanfeng Zhou
The Dynamic Chinese Restaurant Process via Birth and Death Processes
Rui Huang, Fengyuan Zhu, Pheng-Ann Heng

TEXAS VII
Senior Member Blue Sky Talks Session 1
Speech Adaptation in Extended Ambient Intelligence Environments
Bonne J. Dorr, Lucian Galcau, Ian Perera, Kristy Hollingshead-Scott, David Atkinson, Mical Clark, William Clancey, Torick Wilks, Eric Foster-Lussier
Impact of Modeling Languages on the Theory and Practice in Planning Research
Jussi Rintanen
Blended Planning and Acting: Preliminary Approach, Research Challenges
Dana S. Nau, Mahd Ghaffar, Paolo Traverso
Building Strong Semi-Autonomous Systems
Shlomo Zilberstein
Steering Evolution Strategically: Computational Game Theory and Opponent Exploitation for Treatment Planning, Drug Design, and Synthetic Biology
Tuomas Sandholm

HILL COUNTRY CD
IAAI-15: E-Commerce & Social Media
Deployed: Planned Protest Modeling in News and Social Media
Sathappan Mudalh, Bert Haan, Jamil Arendondo, David Maris, Lise Gotos, Graham Katz, Naren Ramakrishnan
Deployed: Position Assignment on an Enterprise Level Using Combinatorial Optimization
Leonard Komarda-Heether, Chris Dornan

4:45 - 5:45
Long Break
Tuesday January 27 — 5:45 PM – 8:45 PM

5:45 - 7:15

TEXAS BALLROOM
AAAI-15 Shakey Celebration
The Shakey Celebration will include a panel with Ed Feigenbaum, Peter Hart, and Nils Nilsson, along with other highlights of this historic project.

7:15 - 8:45

ZILKER BALLROOM
AAAI-15 Poster / Demo Reception 1
The Poster / Demo Reception will include technical poster presentations by authors of all papers presented today as Poster Ads, as well as the demos listed below. Doctoral Consortium posters will also be presented (listed below), and robotics exhibitions, Virtual Agents demos (listed below), and RoboCup exhibitions will be available.

AAAI-15 Technical Demos
Bottom-Up Demand Response by Following Local Energy Generation Voluntarily
Tobias Linnenberg, Alexander Fay, Michael Kaisers

The Network Data Repository with Interactive Graph Analytics and Visualization
Ryan A. Rossi, Nesreen K. Ahmed

Hanumant Redkar, Sudha Bhingardive, Dipak Kanoja, Pushpak Bhattacharyya

Towards Cognitive Automation of Data Science
Alain Biem, Maria A. Butrico, Mark D. Feldman, Tom Kloer, Yuri Malinsky, Kenney Ng, Adam Perer, Chandra Reddy, Anton V. Ribarov, Horst Samuelowitz, Daby Sow, Gerald Tesauro, Deepak Turgut

VecLP: A Realtime Video Recommendation System for Live TV Programs
Sheng Gao, Dai Zhang, Honggang Zhang, Junxin Liu, Chao Huang, Yonghong Zhang, Jun Guo

DeepTutor: An Effective, Online Intelligent Tutoring System that Promotes Deep Learning
Vasile Rus, Nobal B. Nirausla, Rajendra Bansode

Cognitive Master Teacher
Raghu Krishnaparam, Luis A. Lastras, Satya Nitta

AAAI-15 Doctoral Consortium Abstract Posters

Modeling Eye Movements when Reading Microblogs
Maria Barrett, Anders Søgaard

Exploiting the Structure of Distributed Constraint Optimization Problems
Ferdinando Fioretto

Realistic Assumptions for Attacks on Elections
Zack Fitzsimmons

Social Hierarchical Learning
Bradley Hayes

Multivariate Conditional Anomaly Detection and Its Clinical Application
Charrngi Hong, Milos Hauskrecht

Probabilistic Planning with Risk-Sensitive Criterion
Ping Hou

Entity Resolution in a Big Data Framework
Mayank Kajimal

Non-Classical Planning for Robotic Applications
Scott Kiesel

Transfer Learning-Based Go-Run Scheduling for Heterogeneous Datacenters
Wei Kuang, Laura E. Brown, Zhenlin Wang

HVC-Aware Occupancy Scheduling (Extended Abstract)
Boon-Ping Lim

Scalable Agent Modeling for Large Multiagent Systems
Carrie Rehbnm

Explaining Answer Set Programming in Argumentative Terms
Claudia Schulz

Optimal Multi-Agent Pathfinding Algorithms
Guni Sharon

Multi-Agent Team Formation: Solving Complex Problems by Aggregating Opinions
Leandro Soriano Marcolino

Scaling-Up Inference in Markov Logic
Deepak Venugopal

Risk-Aware Scheduling throughout Planning and Execution
Andrew J. Wang

Virtual Agents Demos
Social Simulation with Virtual Agents
Arnay Bulu

Cerebella: Automatic Generation of Nonverbal Behavior for Virtual Humans
Margot Lhomme, Yaya Xu, Stacy Marsella

Scheherazade: Crowd-Powered Interactive Narrative Generation
Bayong Li, Mark O. Reid

SimSensei Demonstration: A Perceptive Virtual Human Interviewer for Healthcare Applications
Louis-Philippe Morency, Giota Stratou, David DeVault, Arno Hartholz, Margaux Lhomme, Gale Lucas, Fabrizio Merlton, Kalliros Georgis, Stefan Scherer, Jonathan Gutth, Stacy Marsella, David Traum, Albert Rizco

LOL — Laugh Out Loud
Florian Picone, Beatrice Biancardi, Yu Ding, Catherine Pelachaud, Maurizio Mancini, Giovanna Varni, Antonio Camarri, Gualtiero Volpe

Using Social Relationships to Control Narrative Generation
Julie Porteous, Fred Charles, Marc CavaTta

Interactive Narrative Planning in The Best Laid Plans
Stephen G. Ware, R. Michael Young, Phillip Wright, Christian Sth
Wednesday, January 28 — 7:45 AM – 10:55 AM

7:45-8:45
FOOTHILLS II, 17TH FLOOR
Women’s Mentoring Breakfast

9:00 - 9:15
ZILKER BALLROOM
Senior Member Blue Sky Award Talk 2
Intelligent Agents for Rehabilitation and Care of Disabled and Chronic Patients
Sari Kraus

TEXAS BALLROOM I
What’s Hot Talks 3
What’s Hot in the Planning Competition
Stefan Edelkamp

TEXAS BALLROOM II–III
What’s Hot Talks 3
What’s Hot in Human Factors in Computing Systems
Wei Li

9:20 - 10:35
TEXAS I
Machine Learning 5
Talks
Compress and Control
Joel Veness, Marc G. Bellemare, Marcus Hutter, Alvin Chua, Guillaume Desjardins
Expressing Arbitrary Reward Functions as Potential-Based Advice
Anna Hurihara, Sam Deslin, Peter Vanrossum, Ann Nowé
High Confidence Off-Policy Evaluation
Philip S. Thomas, Georgios Theodorou, Mohammed Gharanazadeh
Improving Approximate Value Iteration with Complex Returns by Bounding
Robert Wright, Xingye Qiao, Lei Yu, Steven Loveless
Poster Ads

Unsupervised Cross-Domain Transfer in Policy Gradient Reinforcement Learning via Manifold Alignment
Hathiram Boo Amma, Eric Eaton, Paul Ruvolo, Matthew E. Taylor
Optimal Column Subset Selection by A-Star Search
Ibrahim Arar, Crystal Maugan, Haim Schwetzer
Policy Tree: Adaptive Representation for Policy Gradient
Ujjwal Das Gupta, Erik Talvitie, Michael Bowling
Don’t Fail for Tuning Parameters: Tuning-Free Variable Selection in High Dimensions with the TREX
Johannes Lederer, Christian J. Müller
A Generalized Reduced Linear Program for Markov Decision Processes
Chandrarajan Lakshminarayanan, Shalabh Shrivastava
Discriminative Feature Grouping
Lei Han, Yu Zhang
Exploiting Task-Feature Co-Clusters in Multi-Task Learning
Linli Xu, Aoting Huang, Jianhuai Chen, Ensheng Chen

TEXAS II–III
AI and the Web 3
Talks
Content-Based Collaborative Filtering for News Topic Recommendation
Zhongqi Lu, Zhicheng Dou, Jianxun Lian, Xing Xie, Qiang Yang

Easily Accessible Paper: Are Features Equally Representative? A Feature-Centric Recommendation
Chenyi Zhang, Ke Wang, Xu Peng, Lin, Qinyu Xu, Jiangsun Sun, Hongkun Yu
COT: Contextual Operating Tensor for Context-Aware Recommender Systems
Qiang Liu, Shu Wu and Liang Wang
A Personalized Interest-Forgetting Markov Model for Recommendations
Jun Chen, Chaoxun Wang, Jiawen Wang
Poster Ads
Content-Aware Point of Interest Recommendation on Location-Based Social Networks
Hui Gao, Jianning Yang, Xi Hu, Huan Lu
Leveraging Social Foci for Information Seeking in Social Media
Suhua Ranganath, Jiliang Tang, Xiu Hu, Hui Sun, Xiaodan Sun, Huan Liu
Extended Property Paths: Writing More SPARQL Queries in a Succinct Way
Valeria Fonada, Giuseppe Perro, Mariano P. Consens
Uniform Interpolation and Forgetting for ALC Ontologies with ABoxes
Patrick Koopmann, Renate A. Schmidt
Lower and Upper Bounds for SPARQL Queries over OWL Ontologies
Birte Grimm, Yegneky Karakash, Ilkuna Kollia, Giorgos Stamos
Consistent Knowledge Discovery from Evolving Ontologies
Franck Leclau and Jeff Z. Pan
Using Description Logics for RDF Constraint Checking and Closed-World Recognition
Peter F. Patel-Schneider

TEXAS V–VI
Knowledge Representation & Reasoning 4
Talks
Incremental Update of Datalog Materialisation: The Backward/Forward Algorithm
Bora Morik, Yavor Nenov, Robert Piao, Ian Horrocks
Instance-Driven Ontology Evolution in DL-Lite
Zhe Wang, Kewen Wang, Zhiqiang Zhaong, Guilian Qi
Existential Rule Languages with Finite Chase: Complexity and Expressiveness
Zhong Zhang, Yan Zhang, Jianhua You
From Classical to Classical Query Answering under Existential Rules
Thomas Lukasiewicz, Marias Vanna Martinez, Andreas Pieris, Gerardo I. Simari
Solving and Explaining Analogy Questions Using Semantic Networks
Adrian Boteanu, Sonia Chernova

HILL COUNTRY AB
Reasoning under Uncertainty 1
Talks
Bayesian Networks Specified Using Propositional and Relational Constructors: Combined, Data, and Domain Complexity
Fabio Gagliardi Cozman, Denis Deratani Mauá
Easily Accessible Paper: Learning Relational Sum-Product Networks
Amr Ashraf Naddah, Pedro Domingos
Lifted Probabilistic Inference for Asymmetric Graphical Models
Guy Van den Broeck, Matthias Niemetz
Linear-Time Gibbs Sampling in Piecewise Graphical Models
Hadi Mehmed Afhar, Scott Sanner, Elhan Abouamjad
Poster Ads
Promoting Causal Effects from Selection Bias
Elia Barabesi, Jin Tian
Multi-SOURCE Domain Adaptation: A Causal View
Kam Zhang, Mengming Gong, Bernhard Schölkopf
On the Decreasing Power of Kernel and Distance Based Nonparametric Hypothesis Tests in High Dimensions
Aaditya Ramdas, Sahank J. Reddi, Barnabas Poczos, Aarti Singh, Larry Wasserman
Submodular Surrogates for Value of Information
Yuxin Chen, Shervin Javadi, Amin Karbasi, J. Andrew Bagnell, Siddharth Srinivasan, Andrew Krause
Value of Information Based on Decision Robustness
Suming Chen, Arthur Choi, Adam Darwiche
Nonstationary Gaussian Process Regression for Evaluating Clinical Laboratory Test Sampling Strategies
Thomas A. Lasko
Loss-Calibrated Monte Carlo Action Selection
Dhiman Abhoonoad, Justin Donome, Scott Sanner

BIG BEND
Machine Learning 7
Talks
Pathway Graphical Lasso
Maxim Greschik, Maryam Fazeli, Daniela Witten, Jin I. Lee
Easily Accessible Paper: PD Disease State Assessment in Naturalistic Environments Using Deep Learning
Nils Yannick Hammerla, James M. Fisher, Peter Andrew, Lynn Rochester, Richard Walker, Thomas Ploetz
Clustering Longitudinal Clinical Marker Trajectories from Electronic Health Data: Applications to Phenotyping and Endotype Discovery
Peter Schalum, Fredrick Wigley, Suchi Saria
Poster Ads
The Hybrid Nested/Hierarchical Dirichlet Process and Its Application to Topic Modeling with Word Differentiation
Yongju Li, Issei Sato, Hiroshi Nakagawa
Collaborative Filtering with Localised Ranking
Chuanjun Bhanjal, Stéphan Clémençon, Romain Gauldie
Using Machine Teaching to Identify Optimal Training Set Attacks on Machine Learners
Shihe Mei, Xiaojin Zhu
Mining User Interests from Personal Photos
Pengtao Xie, Yulun Pei, Yuan Xie, Eric Xing
Self-Paced Learning for Matrix Factorization
Qian Zhao, Deyu Meng, Lu Jiang, Qi Xie, Pengtao Xie, Yulong Pei, Yuan Xie, Eric Xing

HILL COUNTRY CD
Reasoning and Planning in Heterogeneous Domains
Talks
Inductive Logic Programming: Semantics and Algorithms for Generalisation
Philip Thomas, Giuseppe Perro, Mariano P. Consens
Learning Water Quality in Heterogeneous Domains
Heshan Du, Hai Nguyen, Natasha Alechina, Greg Hines, Alexandra Swanson, Margaret Funkhouser
Towards a Semantics for Xi-Ki
Eugene Charniak

10:30 - 10:55
Coffee Break

On the Equivalence of Linear Discriminant Analysis and Least Squares
Kikuo Lee, Junmo Kim
Inertial Hidden Markov Models: Modeling Change in Multivariate Time Series
George D. Montetache, Saeid Amini, Nikolay Laptev
RISVM: A Randomised Nonlinear Approach to Large-Scale Anomaly Detection
Sarah M. Erfani, Maha Bakashmothlg, Sathurakan Rajasegaran, Shunka Karunasekera, Chru Leckie
Outlier-Robust Convex Segmentation
Barker Katz, Koby Crammer
Aligning Mixed Manifolds
Thomas Boucher, Clifton J. Carey, Siddharth Mada- hevan, Melinda Darby Dar
A Regularized Linear Dynamical System Framework for Multivariate Time Series Anomaly Detection
Zihao Liu, Milos Hauskrecht

TEXAS VII
Classic Paper Award Talk / Robotics Student Fellowship Talks
Classic Paper Award Talk: Statistical Parsing with a Context-Free Grammar and Word Statistics
Eugenio Culurciello
Robotics Student Fellowship Talks 1
Task-Oriented Planning for Manipulating Articulated Mechanisms Under Model Uncertainty
Venkatakrishnan Narayanaswami
Learning the State of the World: Object-Based State Estimation for Mobile-Manipulation Robots
Lawson L.S. Wong
Time-Optimal Learning, Exploration and Control for Mobile Robots in (Partially) Known Environments
Vladislav Nenchev
Plan Execution Monitoring through Detection of Unmet Expectations about Action Outcomes
Juan Pablo Mendez
Representation Learning for Robotics
Rico Jonschkowski
A Divide and Conquer Approach to Control Complex Continuous State Dynamic Systems using Hierarchical Reinforcement Learning
Sean Harris

HILL COUNTRY CD
IAAI-15: Crowdsourcing and NLP
Emerging: Aggregating User Input in Ecology
Citizen Science Projects
Greg Hines, Alexander Swanson, Margaret Funkhouser, Chris Lintott
Emerging: Using Qualitative Spatial Logic for Validating Crowd-Sourced Geospatial Data
Heran Du, Hai Nguyen, Natasha Alechina, Brian Logan, Michael Jackson, John Goodwin
Emerging: Named Entity Recognition in Travel-Related Search Queries
Brooke Cown, Sven Zethelius, Brittany Luk, Teodora Bates, Prachi Charde, Dastaco Zhang

SCHEDULE: WEDNESDAY MORNING 19
Wednesday, January 28 — 10:55 AM – 12:10 PM

10:55 - 12:10

TEXAS I

Machine Learning 6

Talks

Obtaining Well-Calibrated Probabilities Using Bayesian Binning
Maithak Pokhraman Naeeni, Gregory F. Cooper, Milos Hauskrecht

Easily Accessible Paper: Modelling Class Noise with Symmetric and Asymmetric Distributions
Jun Du, Zhihua Cai

Bayesian Model Averaging in锐 Bayes (BMA NB): Averaging over an Exponential Number of Feature Models in Linear Time
Ga Wa, Scott Sanner, Rodrigo E. S. Oliveira

Improving Multi-Step Prediction of Learned Time Series Models
Arzu Venketaraman, Martial Hebert, J. Andrew Bagnell

Poster Ads

A Closed Form Solution to Multi-View Low-Rank Regression
Shaizheng Zhang, Xuxin Cai, Chris Ding, Feiping Nie, Heng Huang

Tensor-Variate Restricted Boltzmann Machines
Tu Dinh Nguyen, Tran Tran, Dinh Phung, Svetla Venkatach

Structured Sparsity with Group-Graph Regularization
Xin-Yu Dai, Jian-Rong Zhang, Shuo Jian Huang, Jia-Jun Chen, Zhi-Hua Zhou

Exact Recoverability of Robust PCA via Outlier Pursuit with Tight Recovery Bounds
Hongyang Zhang, Zhoulin Lin, Chao Zhang, Edward Y. Chang

Personalized Tag Recommendation through Hierarchical Conceptual Structuring for Collective Social and Behavioral Information
Anika Schumann, Freddy Lucic

Robust Image Sentiment Analysis Using Progressively Trained and Domain Transferred Deep Networks
Quanzeng You, Jiebo Luo, Hailin Jin, Jianchao Yang

Perceiving Group Themes from Collective Social and Behavioral Information
Peng Cui, Tianyang Zhang, Fei Wang, Peng He

Exploring Key Concept Paparatching Based on Pivot Language Translation for Question Retrieval
Wen-Nan Zhang, Zhao-Yan Ming, Yu Zhang, Ting Liu, Tai-Song Chia

TEXAS VI

Heuristic Search and Optimization 1

Recursive Best-First Search with Boundeds Overhead
Matthew Hatem, Scott Kiesel, Wheeler Ramd

Limitations of Front-to-End Bidirectional Heuristic Search
Joseph K. Barker, Richard E. Kerf

Value-Directed Compression of Large-Scale Assignment Problems
Tyler Liu, Craig Boutilier

Poster Ads

Algorithm Selection via Ranking
Richard J. Oentaryo, Stephanus Daniel Hando, Hoong Chin Lau

Solving Hard Stable Matching Problems via Local Search and Cooperative Parallelization
Danny Munera, Daniel Diaz, Salvador Abreu, Francesca Rossi, Vijay Saraswat, Philippe Codognet

Optimizing the CVaR via Sampling
Arve Tatar, Younan Ghaemian, Shu Mannor

A Mathematical Programming-Based Approach to Determining Objective Functions from Qualitative and Subjective Comparisons
Takeshi Yoshizumi

Approximate Decomposition Algorithm for Allocating Marketing Channels
Danlue Hatano, Takuro Fukunaga, Takeo Masuda, Ken-ichi Kawatayahoshi

An Efficient Forest-Based Tabu Search Algorithm for the Split-Delivery Vehicle Routing Problem
Zichen Zhang, Huang He, Zhixing Luo, Hu Qin, Songhan Guo

Multi-Agent Path Finding on Strongly Bounded Memory Graphs
Ad Botea, Pavel Surynek

Two Weighting Local Search for Minimum Vertex Cover
Shawan Cui, Jinkun Lin, Kaile Su

Exploiting Variable Associations to Configure Efficient Local Search in Large-Scale Set Partitioning Problems
Shuai Umetani

Improved Local Search for Binary Matrix Factorization
Seysal Hamid Mirzaee, Eric Gaussier, Alexandre Termier

Stochastic Local Search for Satisfiability
Andreas Fohrlich, Armin Bries, Christoph M. Wintersteiger, Yusuf Hamadi

TDS+: Improving Temperature Discovery Search
YaPin Zhang, Martin Müller

HILL COUNTRY AB

Reasoning under Uncertainty 2

Talks

An Improved Lower Bound for Bayesian Network Structure Learning
Xuanfan Fan, Changhe Yuan

Spectral Learning of Predictive State Representations with Insufficient Statistics
Alic Kulesza, Nian Jiang, Satinder Singh

Knowledge-Based Probabilistic Logic Learning
Philip Odum, Tushar Khot, Reid Porter, Sri-sram Natarajan

Learning Relational Kalman Filtering
Jackie Chiu, Eyal Amir, Tianfang Xu, Albert J. Valucchi

Poster Ads

An Exact Algorithm for Solving Most Relevant Explanation in Bayesian Networks
Xuanfan Zhu, Changhe Yuan

Support Consistency of Direct Sparse-Change Learning in Markov Networks
Song Liu, Taiji Suzuki, Masashi Sugiyama

Concurrent PAC RL
Zhuanhan Daniel Guo, Emma Brunskill

Nonparametric Scoring Rules
Erik Zawadzki, Sebastien Laflamme

Probabilistic Graphical Models for Boosting Cardinal and Ordinal Peer Grading in MOOCs
Fei Ma, Dan Yeung

Learning to Reject Sequential Importance Samples for Continuous-Time Bayesian Networks
Jeremy C. Weiss, Srinuai Natarajan, C. David Page

Representing Aggregators in Relational Probabilistic Models
David Buchman, David Poole

BIG BEND

Game Theory & Economic Paradigms 2

Talks

On a Competitive Secretary Problem
Anna Karlin, Eric Lei

Computing Nash Equilibrium in Interdependent Defense Games
Hau Chau, Luo E. Ortiz

Combining Compact Representation and Incremental Generator in Large Games with Sequential Strategies
Brasitav Bouancy, Albert Xin Jiang, Milind Tambe, Christopher Kiekintveld

A Graphical Representation for Games in Partition Function Form
Oskar Skibski, Tomasz P. Michalak, Yuke Sakarati, Michael Woodfied, Makoto Yehn

Poster Ads

Background Games with Distance-Based Strict Uncertainty
Roshan Per, David Parkes

Efficient Computation of Semivalues for Game-Theoretic Network Centrality
Piotr L. Szczepanski, Matuek K. Tarkowski, Tomasz P. Michalak, Paul Harrenstein, Michael Woodrige

Optimal Machine Strategies to Commit to in Two Person Repeated Games
Song Zuo, Pingzhong Tang

Security Games with Physical Affinities
Jairar Gan, Bo An, Turgay Varolbeych

Online Learning and Profit Maximization from Revealed Preferences
Kareem Amin, Rachel Cummings, Lili Dworkin, Michael Kearns, Aaron Roth

Learning Valuation Distributions from Partial Observation
Avrim Blum, Tushay Mansour, Jamie Morgen- stern

Sequence-Form Algorithm for Computing Stadelberg Equilibria in Extensive-Form Games
Brantilavan Bouancy, Jefre Cemrak

TEXAS VII

Senior Member Blue Sky Talks 2

Towards a Programmer’s Apprentice (Again)
Howard Shrobe, Boris Katz, Randall Davis

Conducting Neuroscience to Guide the Development of AI
Jeffrey Mark Suckin

Mechanism Learning with Mechanism In-duced Data
Zo Yan Liu, Wei Chen, Tao Qin

Challenges in Resource and Cost Allocation
Toby Walsh

Explaining Watson: Polymath Style
Woldek Zadrozny, Valeria de Paiva, Lawrence S. Moss

HILL COUNTRY CD

IAAI-15: Challenge Paper Session

Leona Morgenstern, Charles L. Ortiz, Jr.

Challenge: Elementary School Science and Math Tests as a Driver for AI: Take the Arts-to Challenge!
Peter Clark

Challenge: Time-Varying Clusters in Large-Scale Flow Cytometry
Jeremy Hyrkas, Daniel Balperin, Bill Howe
Wednesday, January 28 — 12:10 PM – 2:50 PM

12:10 - 1:40
Lunch Break / Student Abstract Talks / AAAI Lunch with a Fellow Program

TEXAS I
Student Abstract Talks
Poster Ads
Representation Discovery for MDPs Using Bisimulation Metrics
Sherry Shanshan Ruan, Gheorghe Comanici, Prakash Panangaden, Dona Precup

"Is It Rectangular!?" Using I Spy as an Interactive, Game-Based Approach to Multimodal Robot Learning
Natalie Paige Parde, Michalis Papakostas, Konstantinos Tsianakis, Rodney D. Nielsen

Multimedia Data for the Visually Impaired
Niket Tandon, Shekhar Sharma, Tanima Makkad

Combining Machine Learning and Crowd-sourcing for Better Understanding Commodity Reviews
Heting Wu, Hailong Sun, Yili Fang, Kefan Hu, Yongqiu Song, Xudong Liu

Just-in-Time Hierarchical Constraint Decomposition
Valentin Mayer-Eichberger

Active Learning for Informative Projection

Retrieval
Madalina Fiterau, Artur Dubrawski

Global Policy Construction in Modular Reinforcement Learning
Ruan Zhang, Zhao Song, Dana H. Ballard

Handling Uncertainty in Answer Set Programming
Wang, JooHyung Lee

Query Abduction for ELH Ontologies
Mahsa Chitsaz, Zhe Wang, Kewen Wang

Planning with Numeric Timed Initial Fluents
Chitra Piacentini, Maria Fox, Derek Long

A New Computational Intelligence Model for Long-Term Prediction of Solar and Geomagnetic Activity
Mahlboobh Parvapooy, John Brooke, Bertil Svensson

Every Team Deserves a Second Chance: Identifying When Things Go Wrong
Vaishnavh Nagarajan, Leandro Soriano Marcolino, Milind Tambe

Touchless Telerobotic Surgery - Is It Possible at All?
Yuan Zhou, Maria Eugenia Cabrera, Juan Pablo Wachs

GEP: A Self-Programming Robot Using Grammatical Evolution
Charles Peabody, Jennifer Seitzer

Language Independent Feature Extractor
Yang-Seob Jeong, Ho-Jin Choi

Self-Organized Collective Decision-Making in a 100 Robot Swarm
Gabriele Valentini, Herko Hamann, Marco Dorigo

Leveraging Common Structure to Improve Prediction across Related Datasets
Matt Barnes, Nick Gisolfi, Madalina Fiterau, Artur Dubrawski

Acronym Disambiguation Using Word Embedding
Chao Li, Lei Ji, Jun Yan

Graphical Representation of Assumption-Based Argumentation
Claudia Schulz

Finding Meaningful Gaps to Guide Data Acquisition for a Radiation Adjudication System
Nick Gisolfi, Madalina Fiterau, Artur Dubrawski

Modelling Individual Negative Emotion Spreading Process with Mobile Phones
Zhanwei Du, Yongjian Yang, Chuang Ma, Yuan Bai

Time-Sensitive Opinion Mining for Prediction
Wenting Tu, David Cheung, Nikos Mamoulis

Sorted Neighborhood for the Semantic Web
Mayank Kejriwal, Daniel P. Miranker

A Goal-Based Model of Personality for Planning Based Narrative Generation
Julio Cesar Bahamín, Camille Barot, R. Michael Young

1:40 - 2:30
ZILKER BALLROOM
AAAI-15 Invited Talk
Deep Learning
Geoffrey Hinton (University of Toronto and Google Inc)
Introduction by Stuart Russell

TEXAS BALLROOM I-III
AAAI-15 Invited Talk
Title TBA
Rayid Ghani (University of Chicago)
Introduction by Peter Yeh

2:30 - 2:50
Coffee Break
Wednesday, January 28 — 2:50 PM – 5:30 PM

TEXAS I

Natural Language Processing 2

Talks

Extracting Verb Expressions Implying Negative Opinions
Huyui Li, Arjun Makkerjee, Jiaying Si, Bo Liu
Unsupervised Phrasal Near-Synonym Generation from Text Corpora
Dhan Gupta, Janma Carrolini, Anastoli Gershman, Steve Klein, David Miller
Phrase Type Sensitive Tensor Indexing Model for Semantic Composition
Yu Zhao, Zhiyuan Liu, Maosong Sun
Learning Word Representations from Relational Graphs
Danushka Belleguie, Takamori Mathura, Yuichi Yoshida, Ken-ichi Kawaiharatuhhi
ZhaoYi Wu, C. Lee Giles
Chun Chen, Vincent Ng
Poster Ads

Microblog Sentiment Classification with Contextual Knowledge Regularization
Fangzhao Wu, Yangqiu Song, Yongfeng Huang
Generating Event Causality Hypotheses through Semantic Relations
Chihara Hashimoto, Kenzato Torisawa, Julien Kloezer, Joong-Hoon Oh
Unsupervised Word Sense Disambiguation Using Markov Random Field and Dependancy Parser
Devendra Singh Chaplot, Pushpaj Bhatcharuaya, Ashwin Paranjape
Semantic Lexicon Induction from Twitter with Pattern Relatedness and Flexible Term Length
Ashiqul Qadir, Pablo P. Mendez, Daniel Grubl, Neal Lewis
Refer-to-an Relations as Semantic Knowledge
Sovon Li, SuJi Hui, Yasha Kava, Poonya Kanzetova, Wei Liu, Alexander C. Berg, Tamara L. Berg, Yijin Chi

TEXAS II–III

Computational Sustainability and AI 2

Talks

Aggregating Electric Cars to Sustainable Virtual Power Plants: The Value of Flexibility in Future Electricity Markets
Machi Kohlen, Wolfgang Ketter
Sharing Rides with Friends: A Coalition Formation Algorithm for Ridesharing
Filippo Risticzia, Alessandro Farnetli, Sarvapatil D. Ramchurn
HVAC-Aware Occupancy Scheduling
Booping Lim, Menkas van den Brul, Sylvia Thielboeck, Scott Backhaus, Russell Bent
Pattern Decomposition with Complex Combinatorial Constraints: Application to Materials Discovery
Stefano Ermone, Roman Le Bras, Santosh K. Suram, John M. Gregory, Carla P. Gomez, Bart Selman, Robert B. van Diver
FutureMatch: Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments
John P. Dickerson, Tuomas Sandholm
Poster Ads

Energy Usage Behavior Modeling in Energy Disaggregation via Marked Hawkes Process
LiQiang Li, Hongyuan Zhu

Recommending Positive Links in Signed Social Networks by Optimizing a Generalized AUC
Dongjin Song, David A. Meyer
Real-Time Predictive Optimization for Energy Management in a Hybrid Electric Vehicle
Alexandar Styler, Ilha Nourbakhsh
Incentivizing Users for Balancing Bike Sharing Systems
Adith Singla, Marco Santoni, Gabor Bartos, Prakriti Akkeri, Mortez Meenah, Andreas Krause
Data Analysis and Optimization for (City)Bike Sharing
Eoin O'Mahony, David B. Smythes
A Simulator of Human Emergency Mobility Following Disasters: Knowledge Transfer from Big Disaster Data
Xuan Song, Quinn Zhang, Yoshikata Sekimoto, Ryoosuke Shibasuki, Nicholas Jie Yuan, Xing Xie
Risk Based Optimization for Improving Emergency Medical Systems
Sanjibya Senabrahaman, Pradeep Varakantham, Hong-Chun Lau

TEXAS V–VI

Knowledge Representation & Reasoning 5

Talks

How Many Diagnoses Do We Need?
Ron Stent, Mir Mallet, Shelly Roger, Alexander Feldman
Knowledge Forgetting in Circumscriptio: A Preliminary Report
Yiyong Wang, Kewen Wang, Zhe Wang, Jiyang Zhang
Partial Meet Revision and Contraction in Logic Programs
Sebastian Bonnetes, Zhiyong Zhang, Kewen Wang
A Syntax-Independent Approach to Forgetting in Disjunctive Logic Programs
James P. Delgrande, Kewen Wang
On the Role of Canonicity in Knowledge Compilation
Gay Van den Brock, Adam Darwiche
Learning Partial Lexicographic Preference Trees over Combinatorial Domains
Xudong Liu, Miirik Truszczynski
Poster Ads

A Comparison of Qualitative and Metric Spatial Relation Models for Scene Understanding
Abhayana Thippur, Chris Burbridge, Lars Kuehn, Marina Albert, John Eickerson, Patrice Jelffent, Nick Hawes
Propagating Ranking Functions on a Graph: Algorithms and Applications
Biyue Qian, Xiang Wang, Ian Davidson

HILL COUNTRY AB

Multiagent Systems 2

Talks

An Empirical Study on the Practical Impact of Prior Beliefs over Policy Types
Stefano V. Albrecht, Jacob W. Crandall, Subrahmanian Ramamoorthy
Incentives for Subjective Evaluations with Private Beliefs
Goran Radiadovic, Bot Fuatlu
UT Austin Villa 2014: RoboCup 3D Simulation League Champion via Overlapping Layered Learning
Patrick MacAlpine, Mike Depinet, Peter Stone
Automated Analysis of Commitment Protocols Using Probabilistic Model Checking
Akin Gunay, Song Songzhang, Yang Liu, Jie Zhang

Game-Theoretic Approach for Non-Cooperative Planning
Jaime Jordan, Eva Onaunda
Multi-Robot Auctions for Allocation of Tasks with Temporal Constraints
Ernesto Nunez, Maria Gini
Poster Ads

Facility Location with Double-Peaked Preferences
Aris Filos-Ratsikas, Mimming Li, Jie Zhang, Quan Zhang
Fast Convention Formation in Dynamic Networks Using Topological Knowledge
Mohammad Rashidul Hasan, Anita Raja, Ana Bazzan
A Counter Abstraction Technique for the Verification of Robot Swarms
Panagiotis Kouvaros, Alessio Lammasico

BIG BEND

Cognitive Systems 1

Talks

Spontaneous Retrieval from Long-Term Memory for a Cognitive Architecture
Justin Li, John Laped
Automatic Ellipsis Resolution: Recovering Covert Information from Text
Maryjoe McShane, Petr Babkin
Automated Construction of Visual-Linguistic Knowledge via Concept Learning from Cartoon Videos
Jung-Woo Ha, Kyung-Min Kim, Byoung-Tak Zhang
Ontology Based Information Extraction with a Cognitive Agent
Peter Linden, Deyre W. Lunsdale, David W. Embley
Extending Analogical Generalization with Near-Misses
Matthew D. McAule, Scott E. Friedman, Kenneth D. Forbus
Learning Plausible Inferences from Semantic Web Knowledge by Combining Analogical Generalization with Structured Logical Regression
Chen Liang, Kenneth D. Forbus
Poster Ads

An Agent-Based Model of the Emergence and Transmission of a Language System for the Expression of Logical Combinations
Josefina Sierra-Sanftz
Predicting Emotion Perception across Domains: A Study of Singing and Speaking
Biyuan Zhang, Emily Bloomer Provost, Robert Swedberg, Georg Eiel
Constructing Models of User and Task Characteristics from Eye Gaze Data for User-Adaptive Information Highlighting
Matthew Gingerich, Cristina Conati
Bayesian Affect Control Theory of Self
Jesse Hoey, Tobias Schröder

TEXAS VII

Senior Member Summary Talks 1

Towards User-Adaptive Information Visualization
Cristina Conati, Giuseppe Carenini, Derek Toker, Sebastion Lall
On the Diagnosis of Cyber-Physical Production Systems: State-of-the-Art and Research Agenda
Oliver Niggebaum, Volker Lowoh
Languages for Mining and Learning
Luc De Raedt
Abstraction for Solving Large Incomplete-Information Games
Tuomas Sandholm

HILL COUNTRY CD

IAAI-15: Healthcare

Deployed: Graph Analysis for Detecting Fraud, Waste, and Abuse in Healthcare
Iu Liu, Eric Bier, Aaron Wilson, Tomo Hon- da, Srirahari Kumar, Lelani Gilpin, John Guerra-Gomez, Daniel Davies
Emerging: Automated Problem List Generation from Electronic Medical Records in IBM Watson
Marthy Desratahonda, Ching-Hui Tien
Emerging Preventing HIV Spread in Homeless Populations Using PSINET
Amulya Yadav, Leonardo Sorsano Marcolino, Eric Rice, Robin Petering, Hanley Winetoreb, Harmony Bousd, Milind Tambe, Heather Carmichael

4:30 - 5:30

Long Break
5:30 - 6:30
TEXAS BALLROOM
AAAI-15 Community Meeting
AAAI welcomes all conference attendees to this inaugural AAAI community meeting, which will also serve as the AAAI Annual Business Meeting. Please join us as we explore current initiatives, and help chart the future course and objectives of AAAI. 
Moderator: Thomas G. Dietterich, AAAI President

6:30 - 8:00
ZILKER BALLROOM
AAAI-15 Poster / Demo Reception 2
The Poster / Demo Reception will include technical poster presentations of all papers presented today as Poster Ads, as well as the demos listed below. Student Abstract posters of talks presented during today’s lunch break will also be presented, and robotics exhibitions and game exhibits will be available.

AAAI-15 Technical Demos
A Planning-Based Assistance System for Setting Up a Home Theater
Fascal Bercher, Felix Richter, Thilo Hörnle, Thomas Geier, Daniel Höller, Gregor Behnke, Florian Nothdurft, Frank Honold, Wolfgang Höller, Michael Weber, Susanne Biundo

Inferring Latent User Properties from Texts Published in Social Media
Svitlana Volkova, Yoram Bachrach, Michael Armstrong, Vijay Sharma

Tartanian7: A Champion Two-Player No-Limit Texas Hold'em Poker-Playing Program
Noam Brown, Sam Ganzfried, Tuomas Sandholm

Circumventing Robots’ Failures by Embracing Their Faults: A Practical Approach to Planning for Autonomous Construction
Stefan Witwicki, Francesco Mondada

On Correcting Misspelled Queries in Email Search
Abhijit Bhole, Raghavendra Udopa

Crow Motion Monitoring with Thermodynamics-Inspired Feature
Xinfeng Zhang, Su Yang, Yuan Tan Tang, Weishan Zhang

A Neural Probabilistic Model for Context Based Citation Recommendation
Wenyi Huang, Zhaohui Wu, Chen Liang, Prasenjit Mitra, C. Lee Giles

CrowdM: Integrating Crowdsourcing with MapReduce for AI-Hard Problems
Ian Chen, Chaokuan Wang, Yiyou Bai

8:15 - 10:00
FOOTHILLS II, 17TH FLOOR
AAAI-15 Games Night

Wednesday, January 28 — 5:30 PM – 10:00 PM

Hyatt Regency Austin Zilker Ballroom First and Second Floors
Thursday, January 29 — 9:00 AM – 11:50 AM

9:00 - 9:50
ZILKER BALLROOM

AAAI-15 Invited Talk
Intelligent Decisions
Meinolf Sellmann (IBM Thomas J. Watson Research Center)
Introduction by Holger H. Hoos

9:50 - 10:10
Coffee Break

10:10 - 11:50
TEXAS I
Natural Language Processing 3

Talks
Dateless Text Classification with Descriptive LDA
Xingyuan Chen, Yuning Xia, Peng Jin, John Carroll

Ordering-Sensitive and Semantic-Aware Topic Modeling
Ming Zhang, Danqi Cai, Wenting Tu

A Neural Probabilistic Model for Context Based Citation Recommendation
Wenji Huang, Zhaohui Wu, Chen Liang, Prenxitra Mitra, C. Lee Giles

Learning to Generate Quotes for Writing
Jwiw Tan, Xiaojun Wan, Jiangao Xiao

Topical Word Embeddings
Yang Liu, Zhiyuian Liu, Tat-Seng Chua, Mustang Sun

Poster Ads
Recurrent Convolutional Neural Networks for Text Classification
Swee Liu, Lihung Xu, Kang Liu, Jun Zhao

A Novel Neural Topic Model and Its Supervised Extension
Ziqiang Cao, Sujian Li, Yang Liu, Wenjie Li, Heng Ji

Surveyor: A System for Generating Coherent Survey Articles on Scientific Topics
Rahul Jha, Bred Cokal, Dragomir Radev

Topic Segmentation with an Ordering-Based Topic Model
Lan Du, John K. Patz, Mark Johnson

A Probabilistic Covariate Shift Assumption for Domain Adaptation
Tamcon Adel, Alexander Wong

Towards Knowledge-Driven Annotation
Yassine Medhat, Claire Gardent, Muriel Foulonieu, Elena Sempere, Eric Ras

Gazetteer-Independent Toponym Resolution Using Geographic Word Profiles
Grant DeKster, Jason Baldwin, Loretta London

TEXAS II-III
Game Theory and Economic Paradigms 3

Talks
Do Capacity Constraints Constrain Coalitions?
Michal Feldman, Ofer Geri

Cooperative Game Solution Concepts that Maximize Stability under Noise
Yaqian Li, Vincent Conitzer

Solving Games with Functional Regret Estimation
Kevin Waugh, Dattin Morrill, J. Andrew Bagwell, Michael Bowling

Hedonic Coalition Formation in Networks
Martin Hoefer, Daniel Vaz, Lisa Wagner

Fair Information Sharing for Treasure Hunting
Yiling Chen, Kohbo Nioumi, Bo Waggomer

Exploring Information Asymmetry in Two-Stage Security Games
Haiqin Xu, Zirun Rahbinovich, Shadhin Dashmi, Milind Tambe

Poster Ads
Balanced Trade Reduction for Dual-Role Exchange Markets
Dengj Zhao, Sarpavapi D. Ramachurn, Enrico H. Gerding, Nicholas R. Jennings

Elicitation for Aggregation
Rafael M. Fongil, Yiling Chen, Jan A. Kast

Controlled School Choice with Soft Bounds and Overlapping Types
Ryozi Kurata, Masafumi Goto, Atsushi Isawaki, Mokutaro Tokyo

Audit Games with Multiple Defender Resources
Jeremiah Blocki, Nicola Christen, Assaam Datta, Ariel Procaccia, Arunesh Sinha

TEXAS V-VI
Planning and Scheduling 3

Talks
AAAI-15 Outstanding Paper Award: From Non-Negative to General Operator Cost Partitioning
Florian Pommerening, Malte Helmert, Gabriele Berger, Jindrich Sepp

Easily Accessible Paper: Automatic Configuration of Sequential Planning Portfolios
Jindrich Sepp, Silvan Severs, Malte Helmert, Frank Hutter

A Generalization of Sleep Sets Based on Operator Redundancy
Robert C. Hofer, Yuxia Alhazrzi, Martin Wehrle

Heuristics and Symmetries in Classical Planning
Alexander Stiefelmann, Michael Kutz, Malte Helmert, Silvan Severs, Martin Wehrle

Tractability of Planning with Loops
Sudhankar Srivastava, Olomu Ziberstein, Abhinak Gupta, Pieter Abbeel, Stuart Russell

Goal Recognition Design for Non-Optimal Agents
Sarah Korn, Avigdor Gal, Erez Karpas

Poster Ads
Tractable Cost-Optimal Planning over Restricted Polytree Causal Graphs
Meyrav Aghbi, Peter Jonsson, Simon Stahlberg

Factored Symmetries for Merge-and-Shrink Abstractions
Silvan Severs, Martin Wehrle, Malte Helmert, Alexander Stiefelmann, Michael Kutz

Some Fixed Parameter Tractability Results for Planning with Non-Acyclic Domain-Transition Graphs
Christian Backström

Measuring Plan Diversity: Pathologies in Application for Mental Simulation of Human Interactions
Dr. An Huang, Amir-massual Farahmand, Kris M. Kitani, J. Andrew Bagnell

BIG BEND

Cooperative Systems 2

Talks
Inference Graphs: Combining Natural Deduction and Subsumption Inference in a Concurrent Reasoner
Daniel R. Schlegel, Stuart Shaprio

Providing Arguments in Discussions Based on the Prediction of Human Argumentative Behavior
Ariel Rosenfeld, Sarit Kraus

Scalable and Interpretable Data Representation for High-Dimensional, Complex Data
Been Kim, Kyun Park, Afshin Rostamizadeh, Julie Shah

Easily Accessible Paper: When Suboptimal Rules
Avshalkom Elmalech, David Sarne, Avi Rosenfeld, Edan Shalom Erez

Heuristic Induction of Rate-Based Process Models
Pat Langley, Adam Arroyo

Poster Ads
Using Supervised Learning to Uncover Deep Musical Structure
Phillip B. Kirlin, David J. Jensen

AFFLICTIVE 2: Enabling Affusive Intuition for Concept-Level Sentiment Analysis
Erik Cambria, Jie Fu, Fedeka Bisto, Soujanya Poria

Moral Decision-Making by Analogy: Generalizations versus Examples
Joseph A. Blasi, Kenneth D. Forbus

Collaboration in Social Problem-Solving
When Diversity Trumps Network Efficiency
Diego V. Noble, Marcelo O. R. Prates, Daniel S. Beste, Luis C. Lamb

An Association Network for Computing Semantic Relatedness
Kyoung Zhang, Kenny Q. Zhu, Steun-won Hwang

A Stackelberg Game Approach for Incentivizing Participation in Online Educational Forums with Heterogeneous Student Populations
Rohith D. Vallam, Priyanka Bhatt, Debmalya Mandal, Y. Narahari

Dialogue Understanding in a Logic of Action and Belief
Alfredo Gabaldón, Pat Langley

TEXAS VII

What's Hot 4

What's Hot in the Angry Birds Artificial Intelligence Competition
Jochen Renz

What's Hot in the Automated Negotiating Agents Competition
Koen Hindriks

What's Hot in the SAT and ASP Competitions
Marin Heule, Torsten Schaub

What's Hot in Knowledge Representation and Reasoning (KR)
Chitta Baral

What's Hot in Knowledge Discovery and Data Mining (KDD)
Fei Wang

What's Hot in Crowdsourcing and Human Computation (HCOMP)
JeffreyRippl

HILL COUNTRY CD

AAAI-15: Fraud Detection and Planning

Deployed: Robust System for Identifying Procurement Fraud
Amit Dharanand, Rajesh Ravi, Bruce Graves, Gopikrishna Manancheri, Markus Ertl

Emerging: Design and Experiment of a Collaborative Planning Service for NetCentric International Brigade Command
Christoph Goettler, Willy Lamal, Israel Mayh, Jacques Vélor

Activity: Deployed Planning for a Lunar Orbital Mission
John L. Bresina


442x356
bital Mission

11:50 AM

24 SCHEDULE: THURSDAY MORNING
Thursday, January 29 — 11:50 AM – 1:50 PM

11:50 - 1:20
Lunch Break / Student Abstract Talks / AAAI Lunch with a Fellow Program

TEXAS I
Student Abstract Talks
Poster Ads
Accelerating SAT Solving by Common Sub-clause Elimination
Yaoyei Yan, Chris E. Gutierrez, Jeriah In-Charles, Forrest Sheng Bao, Yuanlin Zhang
Dealing with Trouble: A Data-Driven Model of a Repair Type for a Conversational Agent
Sviatlana Höhn
Combining Ontology Class Expression Generation with Mathematical Modeling for Ontology Learning
Jedrzej Potoniec, Agnieszka Lawrynowicz
Effect of Spatial Pooler Initialization on Column Activity in Hierarchical Temporal Memory
Mackenzie Leake, Lisy Xia, Kamal Rocks, Wayne Imaino
Active Advice Seeking for Inverse Reinforcement Learning
Phillip Odom, Srinivas Narayan
A Sequence Labeling Approach to Deriving Word Variants
Jennifer D’Souza
Learning Word Vectors Efficiently Using Shared Representations and Document Representations
Qun Luo, Weiran Xu
What Is the Longest River in the USA? Semantic Parsing for Aggregation Questions
Kun Xu, Sheng Zhang, Yansung Feng, Song-Jang Huang, Dongyuan Zhao
A Multi-Pass Sieve for Name Normalization
Jennifer D’Souza
Improving Microblog Retrieval from Exterior Corpus by Automatically Constructing a Microblogging Corpus
Wenting Tu, David Cheung, Nikos Mamoulis
Spatio-Temporal Signatures of User-Centric Data: How Similar Are We?
Munta Shakla, Aditya Telang, Sahil Jodhi, L. Venkat Subramaniam
Coupled Collaborative Filtering for Context-Aware Recommendation
Xinxiun Jiang, Wei Liu, Longbing Cao, Guandong Long
Predicting the Quality of User Experiences to Improve Productivity and Wellness
Priya Lekha Doni, Jacob Rosenblum, Alex Gruber, James C. Boerkoel Jr.
Designing Vaccines that Are Robust to Virus Escape
Svitasudha Panda, Yergony Vorobeychik
A Succinct Conceptualization of the Foundations for a Network Organization Paradigm
Saad Alqithami
Actionable Combined High Utility Itemset Mining
Jingyu Shao, Junfa Yin, Wei Liu, Longbing Cao
Stochastic Blockmodeling for Online Advertising
Li Chen, Matthew Patton
Improving Cross-Domain Recommendation through Probabilistic Cluster-Level Latent Factor Model
Siting Ren, Sheng Gao, Jianxin Liao, Jun Guo
Characterizing Performance of Consistency Algorithms by Algorithm Configuration of Random CSP Generators
Daniel J. Geschwender, Robert J. Woodward, Berthe Y. Choueiry
On Manipulability of Random Serial Dictatorship in Sequential Matching with Dynamical Preferences
Hadi Hosseini, Kate Larson, Robin Cohen
Placing Influencing Agents in a Flock
Katie Genter, Peter Stone

1:20 - 1:50
ZILKER BALLROOM
Video Competition Awards

Hyatt Regency Austin First Floor
Thursday, January 29 — 1:55 PM – 3:30 PM

1:55 - 3:10

TExAS / Machine Learning 8

Talks
Marginalized Denoising for Link Prediction and Multi-Label Learning
Zheng Chen, Minmin Chen, Kilian Q. Weinberger, Weixiong Zhang

Large-Margin Multi-Label Causal Feature Learning
Chang Xu, Dacheng Tao, Chao Xu

Robust Covariate Shift Correction
Sashank Jakkam Reddi, Barnabás Póczos, Alex Smola

Poster Ads
TODTLER: Two-Order-Deep Transfer Learning
Jan Van Haaren, Andrey Kolobov, Jesse Davis

Absent Multiple Kernel Learning
Xinxing Liu, Lei Wang, Jianying Yin, Yong Don, Jiai Zhang

Learning Sparse Representations from Images with Uncertain Group Structures: Model, Algorithm and Applications
Longwen Gao, Shuigeng Zhou

Large Margin Metric Learning for Multi-Label Prediction
Weiwei Liu, Ivor W. Tsang

Variational Inference for Nonparametric Bayesian Quantiile Regression
Satchintha Abeywarana, Fabio Ramos

Multi-Task Learning and Algorithmic Stability
Yu Zhang

Random Gradient Descent Tree: A Combinatorial Approach for SVM with Outliers
Ha Dong, Jinhua Xu

A Reduction of the Elastic Net to Support Vector Machines with an Application to GPU Computing
Quan Zhou, Wentin Chen, Shijie Song, Jacob R. Gardner, Kilian Q. Weinberger, Yixin Chen

Nyström Approximation for Sparse Kernel Methods: Theoretical Analysis and Empirical Evaluation
Zenglun Xu, Rong Jin, Bin Shen, Shenghuo Zhu

Gaussian Cardinality Restricted Boltzmann Machines
Chong Wan, Xiaoming Jin, Guiguang Ding, Doushun

Unsupervised Feature Learning through Dis- sertative Discriminative Feature Accumulation
Paul A. Sculley, Gregory Morra, Justin K. Pagh, Kenneth O. Stanley

Adaptive Sampling with Optimal Cost for Class-Imbalance Learning
Yixun Feng

Non-Linear Regression for Bag-of-Words Data via Gaussian Process Latent Variable Set Model
Yuya Yoshikawa, Tomoharu Iwata, Hiroshi Kitagawa

Initializing Bayesian Hyperparameter Optimization via Meta-Learning
Matthias Feurer, Jost Tobias Springenberg, Frank Hutter

Parallel Gaussian Process Regression for Big Data: Low-Rank Representation Meets Markov Approximation
Kuan Hsiang Liu, Jiangbo Yu, Jie Chen, Patrick Jaillet

TExAS / III

AI and the Web 5

Talks
Sub-Merge: Driving Down to the Attribute-Value Level in Statistical Schema Matching
Zhe Lim, Benjamin I. P. Rabenstein

OMNI-Prop: Seamless Node Classification on Attribute-Label Correlation
Yuhe Yamaguchi, Christos Faloutsos, Hirokazu Kitaewa

Retweet Behavior Prediction Using Hierarchical Dirichlet Process
Qi Zhang, Yeyan Gong, Ya Guo, Xuexian Huang

RAIN: Social Role Aware Information Diffusion
Yang Yang, Jie Tang, Cai Wang, Qi Le, Jing Cheng, Ji Long, Li

Poster Ads
Using Matched Samples to Estimate the Effects of Exposure on Mental Health from Twitter
Virgili Larderose, Dong Xu, Aron Calot

VEFLA: Relating an Image Tweet’s Text and Images
Tao Chen, Hany M. Salah Eldien, Xuanquan He, Min-Yen Kan, Dongyan Li

Inferring Same-as Facts from Linked Data: An Iterative Import-by-Query Approach
Mustafa Al-Bakri, Manuel Atencia, Stefan Llave, Marie-Christine Rouset

Pragia: Towards Recognizing Whatever You Want from Images without Image Labeling
Xiao Zhang, Irwin King, Michael R. Lyu

Exploring Social Context for Topic Identification in Short and Noisy Texts
Xiong Yao, Wang Zhang, Wendi Han, Guoyong Cai

Visually Interpreting Names as Demographic Attributes by Exploiting Click-Through Data
Yan Ting Chen, Tin Yi Kau, Chou Chieh, Xuan Zhang, Xuejiao Huang

Incorporating Implicit Link Preference into Overlapping Community Detection
Hongyi Zhang, Irwin King, Michael R. Lyu

TExAS / VI

AI and the Web 7

Talks
A Tri Role Topic Model for Domain-Specific Question Answering
Zongming Gu, Atzin Sun, Quan Yuan, Gao Cong

Efficient Top-k Shortest-Path Distance Queries on Large Networks by Pruned Landmark Labeling
Takuya Akiba, Takamori Hayashi, Nezomi Nori, Yachiaw Isao, Yachiwa Yuko

A Probabilistic Model for Bursty Topic Discovery in Microblogs
Xiaohui Yan, Jinfeng Guo, Yanyan Lan, Jun Xu, Xueyi Cheng

A Stochastic Model for Detecting Heterogeneous Link Communities in Complex Networks
Dongxiao He, Dayou Liu, Di Jin, Weixiong Zhang

A Hybrid Approach of Classifier and Cluster-Base Learning for Solving the Missing Node Problem
Sagai Siva, Ari Rosenfeld, Sarti Kraus, Navon Avraham

HILL COUNTRY AB

Vision 2

Talks
Easily Accessible Paper: Deep Representation Learning with Target Coding
Shao Yang, Ping Luo, Chen Chen, Larry Ya, Kenneth W. Shum, Xiaofu Yang

Learning Face Hallucination in the Wild: A Probabilistic Model for Bursty Topic Discovery in Microblogs
Xiao Zhang, Irwin King, Michael R. Lyu

Poster Ads
A Local Sparse Model for Matching Problem
Bao Jiang, Jin Yang, Chao Ding, Bin Luo

Learning Predictable and Discriminative Attributes for Visual Recognition
Yuchen Guo, Guiguang Ding, Xiaoming Jin, Junmin Wang

Complex Event Detection via Event Oriented Dictionary Learning
Yan Yan, Yi Yang, Hanquan Shen, Deyu Meng, Gaowen Liu, Alexander Hauptmann, Nici Sebe

Cross-Modal Image Clustering via Canonical Correlation Analysis
Cheng Jin, Wenlun Man, Ruan Zhang, Yuejie Zhang, Xueyang Xue

Jointly Modeling Deep Video and Compositional Text to Bridge Vision and Language in a Unified Framework
Ran Chuan, Guang Xu, Wei Chen, Jason J. Corso

On Vectorization of Deep Convolutional Neural Networks for Vision Tasks
Ran Xu, Yitian Li, Yubo Wang, Ensheng Chen

Compute less to Get more: ORC to Improve Sparse Filtering
Johannes Lederer, Sergio Guadarrama

Swiss-System Based Cascade Ranking for Gist-Based Person Re-identification
Lan Wei, Yongheng Tian, Yaoyu Wang, Yujian Huang

Online Detection of Abnormal Events Using Incremental Coding Length
Janyuta K. Dutta, Bonny Banerjee

Exploring Semantic Inter-Class Relationships (SIR) for Zero-Shot Action Recognition
Chuang Gan, Ming Lin, Yi Yang, Yuting Zhang, Alexandre G. Hauptmann

BIG BEND

Game Theory and Economic Paradigms 4

Talks
A Mechanism Design Approach to Measure Awareness
Dadou Fardissi, Carinne Ventre, Gabol Arany

Easily Accessible Paper: Strategy-Proof and Efficient Kidney Exchange Using a Credit Mechanism
Chen Hanay, John P. Dickerson, Avinatan Hassidim, Tsachy Weiss, David Sarne

Assessing the Robustness of Greec-Mclean with Autimated Mechanism Design
Michael Albert, Vincent Conitzer, Giuseppe Lapompa

A Unifying Hierarchy of Valuations with Complements and Substitutes
Urfel Feige, Michal Feldman, Nicole Immorlica, Rani Izak, Brendan Lucier, Vitaly Syrgkanis

A Faster Core Constraint Generation Algorithm for Combinatorial Auctions
Benedikt Bude, Sven Seuken, Benjamin Lobner

ACCEPTED TOTAL: 465

TExAS / VII

ZILKER 4

IAAI 30th Anniversary Paper

Process Diagnosis System (PDS) – A 30 Year History
Edward D. Thompson, Ethan Frelich, James C. Bellows, Benjamin E. Bassford, Edward J. Skids, Mark S. Fox

3:10 - 3:30

Coffee Break

of Natural Language to Manipulation Instructions
Dipendra Kumar Maurya, Jaeyoung Sung, Kevin Lee, Ashutosh Saxena

Learning to Locate from Demonstrated Searches
Paul Vernaza, Anthony Stentz

Fully Decentralized Task Swaps with Optimized Local Searching
Lantao Liu, Nathan Michael, Dylan Sholl

HILL COUNTRY CD

Natural Language Processing 4

Talks
Local Context Sparse Coding
Seungryun Kim, Jonenee Lee, Gay Lebanon, Haunin Park

English Light Verb Construction Identification Using Lexical Knowledge
Wei-Teh Chen, Claire Bomal, Martha Palmer

Easily Accessible Paper: Learning Greedy Policies for the Easy–First Framework
Jun Xie, Chao Ma, Jianhuan Ruo Doppa, Pranabendu Mannem, Xiaoli Fern, Thomas G. Dietterich, Prasad Tadepalli

Weakly Supervised Grammar-Informed Bayesian CCG Parser Learning
Dan Garrett, Cyer Dyer, Jason Baldridge, Noah A. Smith

Poster Ads
Word Segmentation for Chinese Novels
Liukun Qiu, Yue Zhang

A Stratified Strategy for Efficient Kernel-Based Learning
Simone Piacino, Dandi Croce, Roberto Bazzi

Joint Anapathetic Processing and Coherence Resolution with Constrained Latent Structures
Emmanuel Lassalle, Pascal Deny

Fast and Accurate Prediction of Sentence Specificity
Jianyi Ji, Jia Ni, Ani Nenkova

Mining User Consumption Intention from Social Media Using Domain Adaptive Convolutional Neural Network
Xiao Dong, Ting Liu, Junwen Duan, Yun-Ne Nie

ZILKER 4

IAAI 30th Anniversary Paper

Process Diagnosis System (PDS) – A 30 Year History
Edward D. Thompson, Ethan Frelich, James C. Bellows, Benjamin E. Bassford, Edward J. Skids, Mark S. Fox

3:10 - 3:30

Coffee Break
Thursday, January 29 — 3:30 PM – 5:45 PM

3:30 - 4:45

**TEXAS I**

**Machine Learning**

**Talks**

Bayesian Maximum Margin Principal Component Analysis  
Changyong Du, Shandian Zhe, Fuchen Zhang, Yuan Qian, Qingsu He, Zhengshi Shi

SP-SVM: Large Margin Classifier for Data on Multiple Manifolds  
Bin Shen, Bao-Di Liu, Qifan Wang, Yi Fang, Jan P. Allebach

**Self-Paced Curriculum Learning**

Lu Jiang, Deyu Meng, Qian Zhao, Shiguang Shan, Alexander G. Hauptmann

**Poster Ads**

Noise-Robust Semi-Supervised Learning by Large-Scale Sparse Coding  
Zhuo Lu, Xin Gao, Leiwei Wang, Ji-Rong Wen, Yi-Qing Huang

AAAI Outstanding Student Paper Honor Mention: Sparse Bayesian Multiview Learning for Simultaneous Association Discovery and Diagnosis of Alzheimer’s Disease  
Shandian Zhe, Zenglin Xu, Yuan Qiong, Peng Yu

Stable Feature Selection from Brain MRIs  
Bo Xin, Linghua Yu, Yizhou Wang, Wensao Gao

Clustering-Based Collaborative Filtering for Link Prediction  
Xiang Wang, Daye He, Danyang Chen, Jinhu Xu

Eigenvalues Ratio for Kernel Selection of Kernel Methods  
Yong Liu, Shizhong Liao

Kickback Cuts Backprop’s Red-Tape: Biologically Plausible Credit Assignment in Neural Networks  
David Balsazhi, Hatastei Vanchanathan, Joachim Buhmann

Pareto Ensemble Pruning  
Chao Qian, Yang Yu, Zhu Hua Zhou

Cross-Modal Similarity Learning via Pairwise Preferences, and Active Supervision  
Y. Zhou, Piysukh Rui, Mingshao Zhu, Lawrence Carin

Optimizing Bag Features for Multiple Instance Retrieval  
Zhuyu Fu, FeiFei Pan, Chang Deng, Wei Liu

**Generalization Analysis for Game-Theoretic Machine Learning**

Haifeng Li, Fei Tian, Wei Chen, Tao Qin, Zhihong Ma, Tao-Yin Liu

**Never-Ending Learning**

Tom Mitchell, William Cohen, Erensam Ir-  
scheda, Partha Talukdar, Justin Betteridge,  
Andrew Carlson, Bhavana Dalve, Matt Garland,  
Bryan Kietz, Jagannath Krishnamurthy, Ni Lao,  
Kathryn Mazaitis, Tahir Mohamed, Nidha  
Nakakihle, Emmanuel Antonio Platanus,  
Alan Ritter, Mehdi Samadi, Burr Settles,  
Richard Wang, Derry Wijaya, Abhinav Gupta,  
Xinlei Chen, Ahbudar Safarov, Malcolm Gravesh,  
Joel Welling

Localized Centering: Reducing Hubness in Large-Sample Data  
Kacuo Hara, Rumi Suzuki, Masaaki Shimbo,  
Kei Kobayashi, Kenji Fukumizu, Milos  
Bavardon

Graph-Sparse LDA: A Topic Model with Structured Sparsity  
Finale Doshi-Velez, Byron C. Wallace, Ryan Adams

**Pattern-Based Variant-Best Neighbors Respiratory Motion Prediction Using Orthogonal Polynomials Approximation**  
Kim Min Kang, Shuyang Wang, Stephen R. Bowen, Wanpracha Charuvastra

**TEXAS II**

**AI and the Web**

**Talks**

Estimating Temporal Dynamics of Human Emotions  
Seungwon Kim, Jeonsoo Lee, Guy Lebanon,  
Hacsin Park

Approximating Model-Based ABox Revision in DL-Lite: Theory and Practice  
Guilin Qi, Zhe Wang, Kewen Wang, Xuening Fu, Zhiqiang Zhuang

Trust Models for RDF Data: Semantics and Complexity  
Valeria Fonsa, Gusau Grundez

Answering Conjunctive Queries over EL  
Knowledge Bases with Transitive and Reflexive Roles  
Zaoqiang Fan, Borzoo Bonakdarpour

**Poster Ads**

Handling owl:sameAs via Rewriting  
Bora Merik, Tavor Nevo, Roberto Piro, Ian Horrocks

Extracting Bounded-Level Modules from Deductive RDF Triplestores  
Marti-Christine Roussea, Federico Ulliana

Mining User Intents in Twitter: A Semi-Supervised Approach toInferring Intent Categories of Tweets  
Junpeng Wang, Guang Cong, Wayne Xin Zhao,  
Xiaoming Li

CrowdWOW: A Modelling Language for Crowd Processes Based on Workflow Nets  
David Sánchez-Charles, Víctor Mántes-Muler,  
Marc Solé, Jordi Xin

Using Frame Semantics for Knowledge Extraction from Twitter  
Anders Segera, Barbara Plank, Héctor Martínez  
Alonso

An Unsupervised Framework of Exploring Events on Twitter: Filtering, Extraction and Categorization  
Deyou Zhou, Liangyu Chen, Yulan He

Target-Dependent Churn Classification in Microblogs  
Hadi Amr, Hui Daume III

**TEXAS III**

**Integrated Systems Track 1**

**Talks**

Toward Mobile Robots Reasoning Like Humans  
Jean Oh, Arne Suppé, Felix Duvallet, Abdelham  
Boularias, Luis Navarro-Sermont, Martial  
Hebert, Anthony Stentz, Jerry Yinavakin,  
Oscar Romero, Christian Lebée, Robert Dean

Learning to Manipulate Unknown Objects in Clutter by Reinforcement  
Abdelham Boularias, J. Andrew Bagnell,  
Anthony Stentz

Yechou Yang, Yi Li, Corina Eftymiou, Tian  
Zhan, Abhishek Datar

Bayesian Active Learning-Based Robot Tutor for Children’s Word-Reading Skills  
Goren Gordon, Cynthia Brafman

**Poster Ads**

Integration and Evaluation of a Matrix Factorization Sequence in Large Commercial ITS  
Carlootta Schatten, Ruth Lonning, Lars Schmidt-  
Thomsen

Going Beyond Literal Command-Based Instructing: Extending Robotic Natural Language Interaction Capabilities  
Tom Williams, Jordan Briggs, Bradley Oster-  
veld, Matthias Schertz

RANSAC versus CS-RANSAC  
Guan-Sik Jo, Koo Sang Lee, Dey-Chandra,  
Chul-Hoe Jang, Myung-Hyun Gia

CORRP: Commonsense Reasoning and Probabilistic Planning, as Applied to Dialog with a Mobile Robot  
Shaj Zhang, Peter Stone

Tackling Mental Health by Integrating Un-  
obtrusive Multimodal Sensing  
Daozu Zhou, Jiebo Luo, Vincent Sizemore,  
Yan Zhou, Jie Hu, Glenn Currry, Heny Kaufz

**HILL COUNTRY A**

**Search and Constraint Satisfaction 1**

The Extendable-Triple Property: A New CSP  
tractable Class beyond BTP  
Philippe Ségou, Cyril Terroux

SAT Modulo Monotonic Theories  
Sam Baroosh, Noah Bayless, Helger H. Hooi,  
Alan J. Hu

SAT-Based Strategy Extraction in Reachability  
Games  
Valeriya Balabanov, Alexander Legg, Nina Nardotyka,  
Leonid Leyzorek

On Computing Maximal Subsets of Clauses that Must Be Satisfiable with Possibly Mutually  
Contradictory Assumptive Contexts  
Phil F. Bernard, Eric Grigore, Jean-Marie  
Lagniez

**Poster Ads**

Efficient Extraction of QBF (Countermodels) from Long-Distance Resolution Proofs  
Valeriy Balabanov, Jie-Hong R. Jiang, Miodos  
Janota, Magdalena Wall

Exploiting Determinism to Scale Relational  
Intent Prediction in Human-Robot Interaction  
Mohamed-Hamza Ibrahim, Christopher Pal,  
Gilles Peantan

Just Count the Satisfied Groundings: Scalable Local-Search and Sampling Based Inference in MLNs  
Deepak Venugopp, Sandeep Sarkhel, Vihvan  
Gogate

**BIG BEND**

**Game Theory & Economic Paradigms 5**

**Talks**

Analysis of Equilibria in Iterative Voting  
Schemes  
Zinovi Rabinovich, Svetlana Obraztsova,  
Omer Lev, Evangelos Markakis, Jeffrey S. Rosenschein

Strategic Voting and Strategic Candidacy  
Markus Brill, Vincent Conitzer

Optimal Personalized Filtering against  
Spear-Phishing Attacks  
Aron Laack, Yevgeniy Vorobeychik, Xenofon  
Koutsoukos

Stable Invitations  
Hoonjun Lee, Yoonsang Seo

**Poster Ads**

Price Evolution in a Continuous Double Auction  
Prediction Market with a Scoring-Rule  
Based Market Maker  
Mithun Chakraborty, Sammy Das, Justin  
Peabody

**The Pricing War Continues: On Competitive Multi-Item Pricing**  
Omer Lev, Joel Oren, Craig Boutilier, Jeffrey S. Rosenschein

The Complexity of Recognizing Incomplete  
Single-Crossing Elections  
Edith Elkind, Piotr Faliszewski, Martin  
Luckner, Svetlana Obraztsova

**Mechanism Design for Team Formation**  
Mason Wright, Yevgeny Vorobeychik

Truthful Mechanisms without Money for  
Non-Homogeneous Facility Location  
Paolo Serafino, Carmine Ventre

**Incentive Networks**  
Tszuchiu Lo, Thomas Moscibroda

**TEXAS VII**

**Robotics Student Fellowship Talks 2**

Socially Assistive Robotics for Long-Term Health Behavior Change  
Allan Grezek

The Development of Socially Assistive Robots for Healthcare Applications to Improve Quality of Life  
Wing-Yu Geoffrey Lin

**Poster Ads**

Incentive Learning and Grouping Haptic Affordances Using Demonstration and Human-Guided Exploration  
Vivian Chu

**Multi-Agent Rendezvous**  
Maksa Melissinos

**HILL COUNTRY CD**

**Game Playing and Interactive Entertainment 1**

**Talks**

Continuity Editing for 3D Animation  
Quentin Galvan, Remi Ronhard, Christopher  
Leino, Marc Christia

Lifting Model Sampling for General Game  
Playing to Incomplete-Information Models  
Michael Scholfield, Michael Thielscher

Automatic Generation of Alternative Starting Positions for Simple Traditional Board Games  
Umair Z. Ahmed, Krishnendu Chatterjee, San-  
it Guvalan

Pruning Game Tree by Rollouts  
Bojun Huang

A Logic for Reasoning about Game Strategies  
Dongbo Zhang, Michael Thielscher

**4:45 - 5:45**

**Long Break**
Thursday, January 29 — 5:45 PM – 8:15 PM

5:45 - 6:45
TEXAS BALLROOM
AAAI-15 Debate on Autonomous Weapons
Participants: Ron Arkin (Georgia Institute of Technology) and Stephen Gorse (Executive Director, Arms Division, Human Rights Watch)
Moderator: Thomas G. Dietterich, AAAI President (Oregon State University)

6:45 - 8:15
ZILKER BALLROOM
AAAI-15 Poster /Demo Reception 3
The Poster / Demo Reception will include technical poster presentations of all papers presented today as Poster Ads, as well as the demos listed below. Student Abstract posters of talks presented during today’s lunch break will also be presented, and robotics exhibitions and game exhibits will be available.

ZILKER BALLROOM
AAAI-15 Technical Demos
Gene Selection in Microarray Datasets Using Progressively Refined PSO Scheme
Yamuna Prasad, R. K. Biswas
Multi-Agent Dynamic Coupling for Cooperative Vehicles Modeling
Maxime Gaytria, Romain Billet, Nour-Eddine El Fauzai, Salima Hasnas, Frédéric Armetta

Friday, January 30 — 9:00 AM – 12:30 PM

9:00 - 9:50
ZILKER BALLROOM 1-2
AAAI-15 Invited Talk
Using Statistics and Semantics to Solve Big (Graph) Data Problems
Lise Getoor (University of California, Santa Cruz)
Introduction by Luc De Raedt

ZILKER BALLROOM 3-4
AAAI-15 Invited Talk
von Neumann’s Dream
Michael Bowling (University of Alberta)
Introduction by Tuomas Sandholm

9:50 - 10:00
ZILKER BALLROOM 1-2
AAAI-15 Award Ceremony

10:00 - 10:20
Coffee Break

10:20 - 11:20
ZILKER BALLROOM 3
Robotics 1

Talks
Intent Prediction and Trajectory Forecasting via Predictive Inverse Linear-Quadratic Regulation
Matthew Manport, Anqi Liu, Brian D. Ziebart
Model-Based Reinforcement Learning in Continuous Environments Using Real-Time Constrained Optimization
Glen Anderson, Fredrik Heintz, Patrick Doeherty
Approximately Optimal Risk-Averse Routing Policies via Adaptive Discretization
Darrell Hoy, Endokia Nikolova

ZILKER BALLROOM 2
Heuristic Search and Optimization 2

Talks
BDD-Constrained Search: A Unified Approach to Constrained Shortest Path Problems
Masaaki Nishino, Norihito Yasuda, Shin-ichi Minato, Masaaki Nogita
Complexity Results for Compressing Optimal Paths
Adi Botea, Ber Strasser, Daniel Harabor
On Interruptible Pure Exploration in Multi-Armed Bandits
Alexander Shleypman, Antonin Komenda, Carmel Domshlak
Proximal Operators for Multi-Agent Path Planning
Josef Bento, Nate Derbesky, Charles Mathy, Jonathan S. Yedidia

ZILKER BALLROOM 3
Search and Constraint Satisfaction 2

Talks
Solving Distributed Constraint Optimization Problems Using Logic Programming
Yup Le, Tran Cao Son, Enrico Pontelli, William Yeoh
Distributed Multiplicative Weights Methods for DCOP
Daisuke Hatano, Yuichi Yoshida
Strong Bounds Consistencies and their Application to Line Constraints
Christian Bessiere, Anastasia Paparrizou, Konas Stergiou
Binarisation via Dualisation for Valued Constraints
David A. Cohen, Martin C. Cooper, Peter G. Jeavons, Stanislav Živný

ZILKER BALLROOM 4
Vision 3

Talks
Metric Learning Driven Multi-Task Structured Output Optimization for Robust Keypoint Tracking
Liming Zhao, Xi Li, Jun Xiao, Fei Wu, Yueting Zhuang
Automatic Topic Discovery for Multi-Object Tracking
Wenhan Luo, Bjorn Stenger, Xiaowei Zhao, Tae-Kyun Kim
Online Dictionary Learning on Symmetric Positive Definite Manifolds with Vision Applications
Shengping Zhang, Shiva Kasiviswanathan, Pong C. Yuen, Mehrdad Harandi
A Boosted Multi-Task Model for Pedestrian Detection with Occlusion Handling
Chao Zhu, Yuicing Pong

11:20 - 11:30
Break (no refreshments)

11:30 - 12:30
ZILKER BALLROOM 1
Robotics 2

Talks
SCRAM: Scalable Collision-Avoiding Role Assignment with Minimal Makespan for Formational Positioning
Patrick MacAlpine, Eric Price, Peter Stone
Learning to Mediate Perceptual Differences in Situated Human-Robot Dialogue
Changsong Liu, Joyce Y. Choi
Spatio-Spectral Exploration Combining In Situ and Remote Measurements
David R. Thompson, David Wettergreen, Greydon Foil, Michael Furlong, Anatha Ravi Kiran
An Entorhinal Hippocampal Model for Simultaneous Cognitive Map Building
Maolin Yuan, Bo Tian, Vui Ann Lim, Huan-Jin Tang, Hau-Thu Li

ZILKER BALLROOM 2
Heuristic Search and Optimization 3

Talks
Massively Parallel A* Search on a GPU
Yichao Zhou, Jinyang Zeng
On Unconstrained Quasi-Submodular Function Optimization
Junchen Hsieh, Kang Zhao, Bao-Liang Lu
A Theoretical Analysis of the Optimization by Gaussian Continuation
Housen Mobahi, John W. Fisher III
Incremental Weight Elicitation for Multisubjective State Space Search
Nawal Banabbou, Patrice Perny

ZILKER BALLROOM 3
Planning and Scheduling 4

Talks
Tighter Value Function Bounds for Bayesian Reinforcement Learning
Ranchoon Lee, Koe-Eung Kim
Reward Shaping for Model-Based Bayesian Reinforcement Learning
Hyeonsoo Kim, Wonsang Lim, Kanghoo Lee, Yong-Kyun Noh, Koe-Eung Kim
Approximate Linear Programming for Constrained Partially Observable Markov Decision Processes
Pascal Poupart, Aarti Malluwat, Pei Pei, Koe-Eung Kim, Bongseok Goh, Michael Bowling
Scalable Planning and Learning for Multiagent POMDPs
Christopher Amato, Frans A. Oliehoek

ZILKER BALLROOM 4
Senior Member Summary Talks 2

Compile!
Pierre Marquis
Semantic Representation
Lenhart Schubert
Achieving Intelligence Using Prototypes, Composition, and Analogy
Vinay K. Chaudhri

Visualizing Inference
Henry Lieberman, Joseph Henka
Salient Object Detection via Objectness Proposals
Tam V. Nguyen
Visualization Techniques for Topic Model Checking
Jasmin Moedock, Colin Allen, Yuichi Yoshida

28 SCHEDULE: THURSDAY EVENING AND FRIDAY MORNING
Virtual Agents Demo Title: Social Simulation with Virtual Agents (Arnav Jhala)
Monday, January 26, 9:00 AM – 5:30 PM (Open House)
Tuesday January 27, 7:45 PM – 8:45 PM (Poster / Demo Session 1)
Zilker Ballroom, First Level

NEW! AAAI/SIGAI Job Market Session
Tuesday, January 27, 4:45 – 5:45 PM
Foothills I, 17th Floor
As an extension of the AAAI / ACM SIGAI Job Market Electronic Bulletin Board, AAAI job seekers and job advertisers are invited to attend a meet and greet session during the long break just prior to the Shakey Celebration on Tuesday evening. Light refreshments will be available.

What's Hot Talks 3: Room Correction
Wednesday, January 28, 9:00 – 9:15 AM
Texas Ballroom I: What's Hot in the Planning Competition (Stefan Edelkamp)
Texas Ballroom II-III: What's Hot in Human Factors in Computing Systems (Wei Li)

IAAI-15 Invited Talk: Data Science for Social Good: Using Your Powers To Make a Social Impact!
Rayid Ghani (University of Chicago)
Wednesday, January 28, 1:40 – 2:30 PM
Texas Ballroom, 2nd Level
The past few years have seen an increasing demand for machine learning/data mining/data science powers. That's wonderful for us data scientists but wouldn't the world be so much better if we also used our computational and analytical powers for social good? In this talk, I'll give examples from work going on around the world including from the summer fellowship program we started at University of Chicago on Data Science for Social Good to show that there are a lot of important social problems in the world that could use our help — from helping students graduate high school to helping disaster victims to improving health.

NEW! AAAI-15 Competition Panel: Competitions: Do They Help Advance AI Research?
Thursday, January 29, 9:00 – 9:50 AM
Texas Ballroom, 2nd Level
Panelists: Michael Bowling (University of Alberta), Koen Hindriks (TU Delft), Claude Sammut (UNSW Australia), and Sven Wachsmuth (Bielefeld University)
Moderator: Michael Thielscher (University of New South Wales)
Panelists will discuss how competitions can help to advance AI research.

Special Meetings Room Changes
The following meetings will be held in Padre Island on the second floor of the Hyatt Regency Austin:

AAAI Press Conference
Tuesday, January 27, 11:00 AM – 12:00 PM
AAAI Publications Committee Meeting
Wednesday, January 28, 7:45 – 8:45 AM