Twenty-Fifth AAAI Conference on
Artificial Intelligence (AAAI-11)

Twenty-Third Conference on Innovative
Applications of Artificial Intelligence (IAAI-11)

Second Symposium on Educational
Advances in Artificial Intelligence (EAAI-11)

August 7 – 11, 2011
Hyatt Regency San Francisco
San Francisco, California, USA

Sponsored by the
Association for the Advancement of Artificial Intelligence

Cosponsored by the National Science Foundation, AI Journal, Google, Inc.
Microsoft Research, Cornell University Institute for Computational Sustainability
Naval Research Laboratory, Yahoo! Research Labs, NASA Ames Research Center
University of Southern California/Information Sciences Institute, ACM/SIGART
IBM Research, Videolectures.net, and David E. Smith

Conference Program

Contents

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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-Fifth AAAI Conference on Artificial Intelligence and the Twenty-Third Conference on Innovative Applications of Artificial Intelligence.

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A complete listing of the AAAI-11 / IAAI-11 / EAAI-11 Program Committee members appears in the conference proceedings.

Awards

All AAAI-11, IAAI-11, and AAAI Special Awards will be presented Tuesday, August 9, 8:30 – 9:00 am, in the Grand Ballroom on the Street Level of the Hyatt Regency.

AAAI-11 Awards

The AAAI-11 Awards will be presented by Program Cochairs Wolfram Burgard and Dan Roth.

AAAI-11 Outstanding Paper Awards

Complexity of and Algorithms for Borda Manipulation — *Jessica Davies, George Katsirelos, Nina Narodytska, Toby Walsh*

Computational Sustainability and Artificial Intelligence Track

Dynamic Resource Allocation in Conservation Planning — *Daniel Golovin, Andreas Krause, Beth Gardner, Sarah J. Converse, Steve Morey*

AAAI-11 Outstanding Senior Program Committee Member Awards

José Neira (University of Zaragoza, Spain)

Kilian Q. Weinberger (Washington University in St. Louis, USA)

AAAI-11 Outstanding Program Committee Member Award

Shane Bergsma (Johns Hopkins University, USA)

IAAI-11 Deployed Applications Awards

The five IAAI-11 Deployed Application awards will be announced by the IAAI-11 chair Daniel Shapiro and cochair Markus Fromherz. Please see the schedule for paper titles. Certificates will be presented during paper sessions.

Robert S. Engelmore Memorial Award and Lecture

The Robert S. Engelmore Award is sponsored by IAAI-11 and *AI Magazine,* and will be presented by Daniel Shapiro and Markus Fromherz, IAAI-11 chair and cochair, and David B. Leake, editor-in-chief, *AI Magazine.* The award and lecture was established in 2003 to honor Robert Engelmore's extraordinary service to AAAI, *AI Magazine,* and the AI applications community, and his contributions to applied AI. The 2011 award will be presented to Ramon Lopez de Mantaras (Artificial Intelligence Research Institute (IIIA) and Spanish National Research Council (CSIC)) for pioneering research contributions in a breadth of artificial intelligence areas, especially pattern recognition and case-based reasoning, leading to novel applications in design, diagnosis, and music,

and for extensive international leadership and service for the AI community. The lecture will be held Wednesday, August 10, 10:20 AM, in Bayfront B on the Bay Level of the Hyatt Regency.

AAAI Special Awards and Recognition

The AAAI Special Awards and Recognition will be presented by Eric Horvitz, Awards Committee Chair and AAAI Past President, and Henry Kautz, AAAI President. Edward Feigenbaum will help present the first AAAI Feigenbaum Prize.

2011 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 2011 prize is being awarded jointly to Sebastian Thrun, Stanford University and William A. "Red" Whittaker, Carnegie Mellon University, for their influential contributions to artificial intelligence via achievements in autonomous vehicle research, including experimental efforts and research leadership of teams addressing challenges with the fielding of robotic systems in the open world. The Feigenbaum Prize is supported by a grant from the Feigenbaum Nii Foundation.

Classic Paper Award

The 2011 AAAI Classic Paper award honors the authors of two complementary papers deemed most influential from the Tenth National Conference on Artificial Intelligence, held in 1992 in San Jose, California for their significant contributions to the area of automated reasoning via methods and analyses on satisfiability, providing foundational insights about constraint satisfaction and search.

Hard and Easy Distribution of SAT Problems — *David Mitchell, Bart Selman, and Hector Levesque*

A New Method for Solving Hard Satisfiability Problems — *Bart Selman, Hector Levesque, and David Mitchell*

Distinguished Service Award

The AAAI Distinguished Service award recognizes one individual each year for extraordinary service to the AI community. The 2011 recipient is David L. Waltz, Director, Center for Computational Learning Systems, Columbia University, for his extraordinary and long-term technical contributions to artificial intelligence including ground-breaking work in computer vision, memory-based reasoning, classification, and information retrieval, and dedicated organizational leadership within the AI research community. Beyond the influence of his ideas and guidance, his insights, wisdom, and generous mentorship have been of great value in the nurturing and support of numerous students and colleagues.

AAAI Fellows Recognition

Each year, the Association for the Advancement

IAAI/AAAI Joint Invited Talk

David Ferrucci

(IBM T. J. Watson Research Center)

Tuesday, August 9, 10:20 – 11:20 AM, *Grand Ballroom*

Computer systems that can directly and accurately answer peoples' questions over a broad domain of human knowledge have been envisioned by scientists and writers since the advent of computers themselves. Open domain question answering holds tremendous promise for facilitating informed decision making over vast volumes of natural language content. Applications in business intelligence, healthcare, customer support, enterprise knowledge management, social computing, science and government would all benefit from deep language processing. The DeepQA project is aimed at exploring how advancing and integrating natural language processing, information retrieval, machine learning, massively parallel computation, and knowledge representation and reasoning can greatly advance open-domain automatic question answering. An exciting proof-point in this challenge is to develop a computer system that can successfully compete against top human players at the *Jeopardy!* quiz show. Attaining champion-level performance *Jeopardy!* requires a computer system to rapidly and accurately answer rich open-domain questions, and to predict its own performance on any given category/question. The system must deliver high degrees of precision and confidence over a very broad range of knowledge and natural language content with a 3-second response time. To do this DeepQA evidences and evaluates many competing hypotheses. A key to success is automatically learning and combining accurate confidences across an array of complex algorithms and over different dimensions of evidence. Accurate confidences are needed to know when to "buzz in" against your competitors and how much to bet. High precision and accurate confidence computations are just as critical for providing real value in business settings where helping users focus on the right content sooner and with greater confidence can make all the difference. The need for speed and high precision demands a massively parallel computing platform capable of generating, evaluating and combing 1000s of hypotheses and their associated evidence. In this talk I will introduce the audience to the *Jeopardy!* Challenge and how we tackled it using DeepQA.

David Ferrucci is the lead researcher and principal investigator for the Watson/*Jeopardy!* project. He has been a research staff member at IBM's T. J. Watson's Research Center since 1995 where he heads up the Semantic Analysis and Integration department. Ferrucci focuses on technologies for automatically discovering valuable knowledge in natural language content and using it to enable better decision making.

AAAI-11 25th Conference Anniversary Panel

Tuesday, August 9, 9:15 – 10:00 AM *Grand Ballroom*

Moderated by Manuela Veloso, AAAI president-elect. *Panelists:* Daniel Bobrow, Ronald J. Brachman, Edward Feigenbaum, Kenneth Forbus, Eric Horvitz, Henry Kautz, Edwina Rissland, David Waltz, Bonnie Webber (additional panelists may be announced onsite)

The first AAAI Conference was held in 1980 at Stanford University. AAAI-11 will bring together several members of the 1980 program committee, authors, and conference participants, as well as current officers and past presidents, to reflect on the rich history of AAAI, its evolution over the past 25 years, and its significance today.

Social Events

Opening Reception

The AAAI-11 Opening Reception will be held Monday, August 8, 6:00 – 7:00 pm in the Grand Ballroom of the Hyatt Regency. This event will provide the traditional opportunity for attendees to socialize in a relaxed setting prior to the beginning of the first day of technical sessions. A variety of hors d'oeuvres and a no-host bar will be available. Admittance to the reception is free to AAAI-11 technical registrants. A $65.00 per person fee ($30.00 for children) will be charged for spouses and other nontechnical conference registrants.

AAAI-11 Poster Session

A conference-wide poster session will be held on Wednesday, August 10, 6:30 – 9:30 pm in the Grand Ballroom of the Hyatt Regency and will feature selected AAAI-11 Technical Program posters, Student Abstracts, Doctoral Consortium Abstracts, Educational Advances in AI Symposium posters, and Poker Competition posters. (For a complete listing of posters, please refer to page 17.) The accompanying reception will include a light dinner buffet and a no-host bar. Admittance to the reception is free to AAAI-11 registrants. A $50.00 per person fee ($25.00 for children) will be charged for spouses and other nontechnical conference registrants.

Workshop Program

Sunday, August 7

W1: Activity Context Representation: Techniques and Languages

Organizers: Vikas Agrawal, Lokendra Shastri, James "Bo" Begole, Tim Finin, Henry Kautz, and Matthai Philipose

Golden Gate Room, Bay Level,
Sunday, 9:00 AM – 5:00 PM
Monday, 9:00 AM – 5:15 PM

W3: Applied Adversarial Reasoning and Risk Modeling (AARM)

Organizers: Noa Agmon, Christopher Kiekintveld, Michael Bowling, and Janusz Marecki

Regency B, Street Level,
9:00 AM – 6:00 PM

W5: AI for Data Center Management and Cloud Computing

Organizers: Donagh Buckley, Burt Kaliski, and Barry O'Sullivan

Pacific G, Pacific Concourse,
9:00 AM – 5:30 PM

W6: Automated Action Planning for Autonomous Mobile Robots

Organizers: Sanem Sariel-Talay, Stephen F. Smith, and Nilufer Onder

Bayview A, Bay Level,
9:00 AM – 5:35 PM

W7: Computational Models of Natural Argument

Organizers: Floriana Grasso, Nancy Green, and Chris Reed

Pacific H, Pacific Concourse,
8:30 AM – 12:00 PM

W12: Language - Action Tools for Cognitive Artificial Agents: Integrating Vision, Action and Language

Organizers: Katerina Pastra, Yiannis Aloimonos, Giorgio Metta, and Luciano Fadiga

Seacliff D, Bay Level
Sunday, 9:00 AM – 6:00 PM,
Monday, 9:00 AM – 6:00 PM

W13: Lifelong Learning from Sensorimotor Experience

Organizers: Joseph Modayil, Doina Precup, and Satinder Singh

Garden B, Atrium Lobby Level,
8:30 AM – 5:30 PM

W14: Plan, Activity, and Intent Recognition (PAIR 2011)

Organizers: Gita Sukthankar, Hung Bui, Christopher W. Geib, and David V. Pynadath

Regency A, Street Level,
9:00 AM – 5:15 PM

W15: Scalable Integration of Analytics and Visualization

Organizers: Ole Mengshoel, Ted Selker, and Henry Lieberman

Boardroom C, Atrium Lobby Level,
9:00 AM – 6:00 PM

Monday, August 8

W1: Activity Context Representation: Techniques and Languages

Continued from Sunday
Monday, 9:00 AM – 5:15 PM

W2: Analyzing Microtext

Organizers: David W. Aha, Douglas W. Oard, Sowyma Ramachandran, and David C. Uthus

Garden A, Atrium Lobby Level,
8:30 AM – 6:00 PM

W4: Artificial Intelligence and Smarter Living: The Conquest of Complexity

Organizers: Benjamin Johnston, Mary-Anne Williams, Ryan Calo, Xiaoping Chen, Michael Genesereth, Sajjad Haider, Roland Vogl, Xun Wang, and Glenn Wightwick

Pacific G, Pacific Concourse,
9:00 AM – 5:00 PM

W8: Generalized Planning

Organizers: Siddharth Srivastava, Sheila McIlraith, Paolo Traverso, and Shlomo Zilberstein

Garden B, Atrium Lobby Level,
8:50 AM – 5:50 PM

W9: Human Computation

Organizers: Luis von Ahn, Panagiotis Ipeirotis, Edith Law, Haoqi Zhang, and Jing Wang

Bayview A, Bay Level,
8:45 AM – 5:45 PM

W10: Human-Robot Interaction in Elder Care

Organizers: Ted Metzler, Susan Barnes, and Lundy Lewis

Pacific H, Pacific Concourse,
8:30 am – 6:00 PM

W11: Interactive Decision Theory and Game Theory

Organizers: Piotr Gmytrasiewicz, Prashant Doshi, Simon Parsons, and Karl Tuyls

Pacific I, Pacific Concourse,
9:15 AM – 4:45 PM

W12: Language - Action Tools for Cognitive Artificial Agents: Integrating Vision, Action and Language

Continued from Sunday
9:00 AM – 6:00 PM

Special Meetings

AAAI Business Meeting

The AAAI Annual Business Meeting will be held Monday, August 8, 1:15 PM – 1:45 PM, Seacliff C, Bay Level, Hyatt Regency San Francisco.

AAAI Conference Committee Meeting

AAAI Conference Committee Meeting will be held Thursday, August 11, 7:45 AM – 8:45 AM, Boardroom B, Atrium Lobby Level, Hyatt Regency San Francisco.

AAAI Executive Council Meeting

The AAAI Executive Council Meeting will be held Monday, August 8, 9:00 AM – 4:00 PM, Boardroom C, Atrium Lobby Level, Hyatt Regency San Francisco. Continental breakfast will be available at 8:30 AM.

AAAI Publications Committee Meeting

The AAAI Publications Committee Meeting will be held Wednesday, August 10, 12:30 – 1:30 PM, Boardroom B, Atrium Lobby Level, Hyatt Regency San Francisco.

AI Magazine Editorial Board Meeting

The *AI Magazine* Editorial Board Meeting will be held Tuesday, August 9, 12:30 – 2:00 PM, Boardroom C, Atrium Lobby Level, Hyatt Regency San Francisco.

of Artificial Intelligence recognizes a small number of members who have made significant sustained contributions to the field of artificial intelligence, and who have attained unusual distinction in the profession. AAAI is pleased to announce the six newly elected Fellows for 2011, who will be honored during the annual Fellows dinner on Tuesday, August 9:

Dieter Fox (University of Washington, USA)
Robert C. Holte (University of Alberta, Canada)
Sheila A. McIlraith (University of Toronto, Canada)
Satinder Singh Baveja (University of Michigan, USA)
Makoto Yokoo (Kyushu University, Japan)
Shlomo Zilberstein (University of Massachusetts Amherst, USA)

AAAI Senior Member Recognition

AAAI congratulates the inaugural group of AAAI senior members, who are being recognized for their long-term participation in AAAI and their distinction in the field of artificial intelligence. The list of new senior members will be announced in the AAAI-11 Opening Ceremony.

Special Competition Awards

For information about the special competition awards, please see the sec-

Morning	Afternoon	Evening
	Sunday, August 7	
Registration Tutorial Forum Workshops AAAI/SIGART DC	Registration Tutorial Forum Workshops AAAI/SIGART DC	
	Monday, August 8	
Registration Tutorial Forum Workshops AAAI/SIGART DC	Registration AAAI Business Meeting Tutorial Forum Workshops AAAI/SIGART DC	Opening Reception Video Competition
	Tuesday, August 9	
Registration AAAI / IAAI Opening Ceremony Awards and Recognition AAAI-11 Anniversary Panel AAAI-11 / IAAI-11 / EAAI-11 Robotics Program Exhibits	Registration Invited Talks AAAI-11 / IAAI-11 / EAAI-11 Robotics Program Exhibits	Student Reception IAAI Google Lab Event Fellows Dinner
	Wednesday, August 10	
Registration Invited Talks AAAI-11 / IAAI-11 / EAAI-11 Robotics Program Exhibits	Registration Invited Talks AAAI-11 / IAAI-11 / EAAI-11 Robotics Program Exhibits	Poster Reception
	Thursday, August 11	
Registration Invited Talks AAAI-11 / IAAI-11 Exhibits	AAAI-11 / IAAI-11	

Invited Talks

Tuesday, August 9

9:15 – 10:00 AM

AAAI-11 25th Conference Anniversary Panel

Moderator: Manuela Veloso (Carnegie Mellon University)
Grand Ballroom, Street Level *(see description on page 3)*

10:20 – 11:20 AM

IAAI-11/AAAI-11 Joint Invited Talk

Building Watson: An Overview of DeepQA for the *Jeopardy!* Challenge

David Ferrucci (IBM T J Watson Research Center)
Grand Ballroom, Street Level *(see description on page 3)*

1:50 – 2:50 PM

AAAI-11 Invited Talk

From Turn-Taking to Social Ties

Karrie Karahalios (University of Illinois)
Grand Ballroom, Street Level

Online communities have been studied from various perspectives since the 1980s. Much of this work has taken existing sociology techniques and molded them to fit a specific electronic environment such as IRC, Usenet, Facebook, and others. The existence of digital traces of online interaction has made this research possible at a large scale. In this talk, Karahalios begins by discussing a brief history of the study of online interaction and the cues used by researchers to formulate their research. She continues describing how the study of online social spaces has changed through the lens of the work done in the Social Spaces Group. Karahalios argues that digital traces can be misleading and new techniques and interfaces are necessary to improve and study social online interaction. This discussion includes work highlighting the differences between interaction between rural and urban areas, tie strength from social network software, and implications of this work. Karahalios concludes by highlighting how online social interaction is diverging from face-to-face interaction and the importance of new methodologies and interfaces for studying this change.

Wednesday, August 10

9:00 – 10:00 AM

AAAI-11 Invited Talk

Registration and Recognition for Robotics

Kurt Konolige (Willow Garage, Inc and Stanford University)
Grand Ballroom, Street Level

Robotic manipulation around the home and office requires perception of the environment and objects within it. In this talk, Konolige highlights the key roles played by visual registration. The first role is in keeping track of where the robot is, and for understanding how multiple views of the environment correspond to each other. The second is in finding and manipulating objects in the world. Registration and recognition methods will be illustrated with examples from Willow Garage's PR2 robot.

10:20 – 11:20 AM

IAAI-11 Invited Talk — Robert S. Engelmore Memorial Award Lecture:

Playing with Cases: Rendering Expressive Music Performance with Case-Based Reasoning

Ramon Lopez de Mantaras (Artificial Intelligence Research Institute (IIIA) and Spanish National Research Council (CSIC))
Bayview B, Bay Level *(see description on page 7)*

1:50 – 2:50 PM

AAAI-11 Invited Talk

Strategic Intelligence in Social Networks

Michael Kearns (University of Pennsylvania)
Grand Ballroom, Street Level

For the past six years at the University of Pennsylvania, we have been conducting controlled human-subject experiments on strategic interaction in social networks. The overarching goal of these experiments is to provide a behavioral counterpart to the flourishing research on mathematical models of social networks, diffusion dynamics, influence in social networks, and related topics. To date we have conducted experiments on a wide variety of strategic and computational tasks in social networks, including graph coloring (which can be viewed as a problem of social differentiation), consensus, biased voting, trading and bargaining in networks, and network formation. These experiments have yielded a wealth of findings and data on the ability of human subjects to solve challenging collective tasks from only local interactions, and have shed light on basic topics such as influence and altruism in social networks, and the relationship between network structure and collective and individual performance and behavior. The experiments also raise interesting challenges for notions of collective intelligence in humans and machines, and for the application of machine learning to the resulting data.

Thursday, August 11

9:00 – 10:00 AM

AAAI-11 Invited Talk

Towards Artificial Systems: What Can We Learn from Human Perception?

Heinrich H. Buelthoff (Max Planck Institute for Biological Cybernetics)
Grand Ballroom, Street Level

Recent progress in learning algorithms and sensor hardware has led to rapid advances in artificial systems. However, their performance continues to fall short of the efficiency and plasticity of human behavior. In many ways, a deeper understanding of how humans process and act upon physical sensory information can contribute to the development of better artificial systems. In this presentation, Buelthoff will highlight how the latest tools in computer vision, computer graphics, and virtual reality technology can be used to systematically understand the factors that determine how humans behave and solve tasks in realistic scenarios.

10:20 – 11:20 AM

IAAI-11 Invited Talk

HaloBook and Progress Towards Digital Aristotle

David Gunning (Vulcan Inc.)
Bayview B, Bay Level

Project Halo is a long-range research effort, pursuing the vision of the Digital Aristotle— a system containing large volumes of scientific knowledge and capable of applying sophisticated problem-solving methods to answer novel questions, with applications in education and scientific research. The current focus of the project is the development of HaloBook — an electronic textbook capable of answering a student's questions. This talk will summarize the history and motivation for Project Halo, describe the current work on HaloBook, and discuss possible Grand Challenges to motivate future research.

IAAI-11 Invited Talk

Robert S. Engelmore Memorial Award Lecture:

Playing with Cases: Rendering Expressive Music Performance with Case-Based Reasoning

Ramon Lopez de Mantaras (Artificial Intelligence Research Institute (IIIA) and Spanish National Research Council (CSIC))
Wednesday, 10:20 – 11:20 AM
Bayview B, Bay Level

Rendering expressive music performances involves complex processes that constitute a challenging research area for computer music research. Besides, it is a rich field for investigating aspects of human intelligence, emotion, and creativity. Case-based reasoning is one of the AI techniques that have produced more promising results in rendering expressive music performances. Furthermore, it has advanced the state of the art in case-based reasoning through the invention of new approaches to case representation, case retrieval and case reuse adapted to musical knowledge. In this talk Lopez de Mantaras will describe in some detail two successful case-based reasoning systems applied to expressive music performance that have been developed at the Artificial Intelligence Research Institute.

Tutorial Forum

AAAI-11 technical registrants may attend up to four consecutive tutorials.

Session I: Sunday, August 7
9:00 AM – 1:00 PM

SA1: Machine Learning in Time Series Databases (and Everything is a Time Series!)
Eamonn Keogh
Bayview B, Bay Level

SA2: Security Games
Chris Kiekintveld, Nicola Gatti, and Manish Jain
Seacliff C, Bay Level

SA3: Discourse Structure: Theory and Practice
Bonnie Webber, Markus Egg, and Valia Kordoni
Seacliff B, Bay Level

Session II: Sunday, August 7
2:00 PM – 6:00 PM

SP1: Event Processing - State of the Art and Research Challenges
Opher Etzion and Yagil Engel
Bayview B, Bay Level

SP2: Human Computation: Core Research Questions and State of the Art
Luis von Ahn and Edith Law
Seacliff C, Bay Level

SP3: Large-Scale Data Processing with MapReduce
Jimmy Lin
Seacliff B, Bay Level

SP4: Recognizing Behavior in a Spatio-Temporal Context
Hans W. Guesgen, Mehul Bhatt, and Stephen Marsland
Seacliff A, Bay Level

Session III: Monday, August 8
9:00 AM – 1:00 PM

MA1: Collective Intelligence
Haym Hirsh
Bayview B, Bay Level

MA2: Discourse Models for Generating Optimized User Interfaces: Theory from AI and Application in HCI
Hermann Kaindl
Seacliff C, Bay Level

MA3: From Structured Prediction to Inverse Reinforcement Learning
Hal Daume III
Seacliff B, Bay Level

MA4: Opinion Mining and Sentiment Analysis
Bing Liu
Seacliff A, Bay Level

Session IV: Monday, August 8
2:00 PM – 6:00 PM

MP1: Algorithms for Classical Planning
Jussi Rintanen
Bayview B, Bay Level

MP2: Conformal Predictions for Reliable Machine Learning: Theory and Applications
Vineeth N. Balasubramanian, Shen-Shyang Ho, Sethuraman Panchanathan, and Vladimir Vovk
Seacliff C, Bay Level

MP3: Information Organization and Retrieval with Collaboratively Generated Content
Eugene Agichtein and Evgeniy Gabrilovich
Seacliff B, Bay Level

MP4: Philosophy as AI and AI as Philosophy
Aaron Sloman
Seacliff A, Bay Level

Student Programs

AAAI-11 Student Only Reception

USC/Information Sciences Institute will host the fifth annual AAAI Student Only Reception, Tuesday, August 9 from 5:45 – 6:45 PM in the Seacliff Foyer on the Bay level of the Hyatt Regency. Snacks and beverages will be served. All AAAI-11 registered students are welcome.

AAAI/SIGART Doctoral Consortium (DC-11)

The Sixteenth AAAI/SIGART Doctoral Consortium program will be held on Sunday and Monday, August 7 – 8, in Marina on the Bay level of the Hyatt. The Doctoral Consortium provides an opportunity for a group of Ph.D. students to discuss and explore their research interests and career objectives in an interdisciplinary workshop together with a panel of established researchers. The fifteen students accepted to participate in this program will also participate in the AAAI-11 Poster Session. All interested AAAI-11 student registrants are invited to observe the presentations and participate in discussions at the workshop. AAAI and SIGART gratefully acknowledge grants from the National Science Foundation, Microsoft Research, and David E. Smith, which provide partial funding for this event.

AAAI Fellow / Student Lunches

First held in 2006, the AAAI Fellow / Student program provides an opportunity for a small number of students to chat with a AAAI Fellow over an informal lunch during the conference. Sign-up sheets are available at the onsite registration desk in the Market Street Foyer on the street level of the Hyatt Regency. Students should meet their designated Fellow in onsite registration on their assigned day.

Doctoral Consortium Schedule

The Sixteenth AAAI/SIGART Doctoral Consortium program will be held on Sunday and Monday, August 7 – 8, in Marina on the Bay level of the Hyatt. The Doctoral Consortium provides an opportunity for a group of Ph.D. students to discuss and explore their research interests and career objectives in an interdisciplinary workshop together with a panel of established researchers. The fifteen students accepted to participate in this program will also participate in the AAAI-11 Poster Session. All interested AAAI-11 student registrants are invited to observe the presentations and participate in discussions at the workshop. AAAI and SIGART gratefully acknowledge grants from the National Science Foundation, Microsoft Research, and David E. Smith, which provide partial funding for this event.

Sunday, August 7

8:40 – 9:00 AM
Welcome and Introductions

9:00 – 9:40 AM
Modeling the Effects of Emotion on Cognition
Marc Sparagen (Mentor: Charles Isbell)

9:40 – 10:20 AM
Long-Term Declarative Memory for Generally Intelligent Agents
Nate Derbinsky (Mentor: Dave Pynadath)

10:20 – 10:50 AM
Break

10:50 – 11:30 AM
Incentive-Compatible Trust Mechanisms
Jens Witkowski (Mentor: Simon Parsons)

11:30 AM – 12:10 PM
Scaling Up Game Theory: Achievable Set Methods for Efficiently Solving Stochastic Games of Complete and Incomplete Information
Liam Mac Dermed (Mentor: Michael Bowling)

12:10 – 12:50 PM
Six Steps to a Successful Research Program
Brad Clement

12:50 – 1:50 PM
Lunch

1:50 – 2:30 PM
Designing Water Efficient Residential Landscapes with Agent-Based Modeling
Rhonda Hoenigman (Mentor: Berthe Choueiry)

2:30 – 3:10 PM
Ensemble Classification for Relational Domains
Hoda Eldardiry (Mentor: Amy McGovern)

3:10 – 3:50 PM
Learning with Imprecise Classes, Rare Instances, and Complex Relationships
Seinath Ravindran (Mentor: David Aha)

3:50 – 4:20 PM
Break

4:20 – 5:20 PM
Panel
Sven Koenig (additional panelists will be added)

7:00 PM
Dinner

Monday, August 8

9:00 – 9:40 AM
A Probabilistic Trust and Reputation Model for Supply Chain Management
Yasaman Haghpanah (Mentor: Munindar Singh)

9:40 – 10:20 AM
Predicting Text Quality for Scientific Articles
Annie Louis (Mentor: Kiri Wagstaff)

10:20 – 10:50 AM
Break

10:50 – 11:30 AM
Developing a Language for Spoken Programming
Benjamin Gordon (Mentor: Kiri Wagstaff)

11:30 AM – 12:10 PM
Learning Sensor, Space and Object Geometry
Jeremy Stober (Mentor: Rich Sutton)

12:10 – 1:10 PM
Panel
Sonia Chernova, Matthew Taylor (additional panelists may be added)

1:10 – 2:10 PM
Lunch

2:10 – 2:50 PM
Joint Inference for Extracting Text Descriptors from Triage Images of Mass Disaster Victims
Niyati Chhaya (Mentor: Bill Smart)

2:50 – 3:30 PM
The AC(C) Language: Integrating Answer Set Programming and Constraint Logic Programming
Forrest Bao (Mentor: Jeremy Frank)

3:30 – 4:00 PM
Break/Survey

4:00 – 4:40 PM
Model Update for Automated Planning
Maria Viviane de Menezes (Mentor: Jeremy Frank)

4:40 – 5:20 PM
Pruning Techniques in Search and Planning
Nir Pochter (Mentor: David Smith)

5:20 – 5:30 PM
Farewell / Collection of Surveys

AAAI 2011 Symposium on Educational Advances in AI (EAAI-11)

EAAI-11 provides a venue for researchers and educators to discuss pedagogical issues and share resources related to teaching AI and using AI in education across a variety of curricular levels (K-12 through postgraduate training), with a natural emphasis on undergraduate and graduate teaching and learning. The symposium will explore how to more effectively teach AI, as well as how themes from AI may be used to enhance education more broadly. EAAI-11 features a technical program, a poster program as part of the conference-wide poster session on Wednesday evening, and a "Model AI" session highlighting innovative, ready-to-adopt materials. EAAI-11 is included in the AAAI-11 technical registration fee, but an EAAI-11 only registration option is also available.

EAAI Schedule

The Symposium on Educational Advances in AI (EAAI-11) will be held in Garden B, Atrium Lobby Level.

Tuesday, August 9

11:30 AM – 12:30 PM

Opening Session

Welcome Remarks
Mehran Sahami, EAAI-11 Organizing Committee

Invited Talk

Rethinking Educational Impact: Topical Robotics for Social Action
Illah Nourbakhsh (Carnegie Mellon University)

1:50 PM – 2:50 PM

Teaching AI with Games

Teaching Introductory Artificial Intelligence through Java-Based Games
Amy McGovern, Zachery Tidwell, and Derek Rushing

Introducing Uninformed Search with Tangible Board Games
Fred Martin

Teaching Reinforcement Learning with Mario: An Argument and Case Study
Matthew Taylor

3:00 PM – 4:00 PM

AI and Education

Science Fiction as an Introduction to AI Research
Judy Goldsmith and Nicholas Mattei

Playing to Program: An Intelligent Programming Tutor for RUR-PLE (Poster Spotlight)
Marie desJardins, Amy Ciavolino, Robert Deloatch, and Eliana Feasley

Lightning Talks
Open microphone presentations

4:20 PM – 5:20 PM

Model AI Assignments

Clue Deduction: An Introduction to Satisfiability Reasoning
Todd Neller, Zdravko Markov, Ingrid Russell, and Dave Musicant

Mastermind Course Project
Marie desJardins and Tim Oates

Reinforcement Learning in a Generalized Mario Domain
Matthew Taylor

Wednesday, August 10

10:20 AM – 11:20 AM

Teaching and Mentoring Workshop I

Introduction and Keynote Lecture: Creating Classroom Engagement through Active Learning
Mehran Sahami (Stanford University)

11:30 AM – 12:30 PM

Teaching and Mentoring Workshop II

Active Learning Working Sessions

2:00 PM – 3:00 PM

Teaching and Mentoring Workshop III

Presentations and Review

3:00 PM – 4:00 PM

Teaching and Mentoring Workshop IV

Teaching Challenges in the Classroom

4:20 – 5:20 PM

CS2013: ACM/IEEE-CS Curriculum Revision
Mehran Sahami (Stanford University) and Zachary Dodds (Harvey Mudd College)

6:30 PM – 9:30 PM

EAAI Poster Session
(AAAI-11 Poster Reception)

	SEACLIFF B, BAY LEVEL	SEACLIFF C, BAY LEVEL	SEACLIFF D, BAY LEVEL	GARDEN A, LOBBY LEVEL
8:30–10:00 AM	8:30 – 9:00 AM *Grand Ballroom, Street Level* **AAAI-11/IAAI-11 Opening Ceremony** Welcome and Opening Remarks Outstanding Award Presentations — Papers, SPC Member, PC Member *Wolfram Burgard and Dan Roth, AAAI-11 Program Cochairs*			
9:15–10:00 AM	9:15 – 10:00 AM *Grand Ballroom, Street Level* **AAAI-11 25th Conference Anniversary Panel** *Moderator:* Manuela Veloso, AAAI President-Elect (Carnegie Mellon University) *Panelists:* Daniel Bobrow, Ronald J. Brachman, Edward Feigenbaum, Kenneth Forbus, Eric Horvitz, Henry Kautz, Edwina Rissland, David Waltz, Bonnie Webber (additional panelists may be added)			
11:30 AM–12:30 PM	**Multi-Agent Systems 1** Constrained Coalition Formation *Talal Rahwan, Tomasz Michalak, Edith Elkind, Piotr Faliszewski, Jacek Sroka, Michael Wooldridge, Nicholas R. Jennings* Computing an Extensive-Form Perfect Equilibrium in Two-Player Games *Nicola Gatti, Claudio Iuliano* Learning in Repeated Games with Minimal Information: The Effects of Learning Bias *Jacob W. Crandall, Asad Ahmed, Michael A. Goodrich*	**Social Networks 1** Composite Social Network for Predicting Mobile Apps Installation *Wei Pan, Nadav Aharony, Alex (Sandy) Pentland* Simulated Annealing Based Influence Maximization in Social Networks *Qingye Jiang, Guojie Song, Gao Cong, Yu Wang, Wenjun Si, Kunqing Xie* Co-Evolution of Selection and Influence in Social Networks *Yoon-Sik Cho, Greg Ver Steeg, Aram Galstyan*	**Mechanism Design 1** Dominant-Strategy Auction Design for Agents with Uncertain, Private Values *David R. M. Thompson, Kevin Leyton-Brown* Market Manipulation with Outside Incentives *Yiling Chen, Xi Alice Gao, Rick Goldstein, Ian A. Kash* Incentive-Compatible Escrow Mechanisms *Jens Witkowski, Sven Seuken, David C. Parkes*	**Description Logics 1** Revisiting Semantics for Epistemic Extensions of Description Logics *Anees Mehdi, Sebastian Rudolph* Integrating Rules and Description Logics by Circumscription *Qian Yang, Jia-Huai You, Zhiyong Feng* Conjunctive Query Inseparability of OWL 2QL TBoxes *B. Konev, R. Kontchakov, M. Ludwig, T. Schneider, F. Wolter, M. Zakharyaschev*
1:50–2:50 PM	**AAAI-11 Invited Talk** *Grand Ballroom, Street Level* From Turn-Taking to Social Ties *Karrie Karahalios (University of Illinois)*			
3:00–4:00 PM	**Multiagent Systems 2** A Game-Theoretic Approach to Influence in Networks *Mohammad T. Irfan, Luis E. Ortiz* Commitment to Correlated Strategies *Vincent Conitzer, Dmytro Korzhyk* Refinement of Strong Stackelberg Equilibria in Security Games *Bo An, Milind Tambe, Fernando Ordonez, Eric Shieh, Christopher Kiekintveld*	**Natural Language Processing 1** WikiSimple: Automatic Simplification of Wikipedia Articles *Kristian Woodsend, Mirella Lapata* Leveraging Wikipedia Characteristics for Search and Candidate Generation in Question Answering *Jennifer Chu-Carroll, James Fan* Grammatical Error Detection for Corrective Feedback Provision in Oral Conversations *Sungjin Lee, Hyungjong Noh, Kyusong Lee, Gary Geunbae Lee*	**Activity and Plan Recognition** Recognizing Plans with Loops Represented in a Lexicalized Grammar *Christopher W. Geib, Robert P. Goldman* Unsupervised Learning of Human Behaviours *Sook-Ling Chua, Stephen Marsland, Hans W. Guesgen* *PGAI:* Balancing Safety and Exploitability in Opponent Modeling *Zhikun Wang, Abdeslam Boularias, Katharina Mülling, Jan Peters*	**Classification 1** Across-Model Collective Ensemble Classification *Hoda Eldardiry, Jennifer Neville* Towards Maximizing the Area under the ROC Curve for Multi-Class Classification Problems *Ke Tang, Rui Wang, Tianshi Chen* Adaptive Large Margin Training for Multilabel Classification *Yuhong Guo, Dale Schuurmans*
4:20–5:20 PM	**Computational Social Choice 1** Campaign Management under Approval-Driven Voting Rules *Ildikó Schlotter, Piotr Faliszewski, Edith Elkind* Optimal Envy-Free Cake Cutting *Yuga J. Cohler, John K. Lai, David C. Parkes, Ariel D. Procaccia* Dominating Manipulations in Voting with Partial Information *Vincent Conitzer, Toby Walsh, Lirong Xia*	**Natural Language Processing 2** Enhancing Semantic Role Labeling for Tweets Using Self-Training *Xiaohua Liu, Kuan Li, Ming Zhou, Zhongyang Xiong* Learning to Interpret Natural Language Navigation Instructions from Observations *David L. Chen, Raymond J. Mooney* Analogical Dialogue Acts: Supporting Learning by Reading Analogies in Instructional Texts *David M. Barbella, Kenneth D. Forbus*	**Mechanism Design 2** Efficiency and Privacy Tradeoffs in Mechanism Design *Xin Sui, Craig Boutilier* On Expressing Value Externalities in Position Auctions *Florin Constantin, Malvika Rao, Chien-Chung Huang, David C. Parkes* VCG Redistribution with Gross Substitutes *Mingyu Guo*	**Computational Sustainability 1: Energy and Natural Resources** Stochastic Model Predictive Controller for the Integration of Building Use and Temperature Regulation *Alie El-Din Mady, Gregory M. Provan, Conor Ryan, Kenneth N. Brown* Linear Dynamic Programs for Resource Management *Marek Petrik, Shlomo Zilberstein* Hybrid Planning with Temporally Extended Goals for Sustainable Ocean Observing *Hui Li, Brian Williams*
EVENING	***Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.*** **Student Reception, 5:45–6:45 PM, Seacliff Foyer, Bay Level / IAAI Google Lab Tour (preregistration required) 6:30–9:30 PM**			

	GOLDEN GATE, BAY LEVEL	MARINA ROOM , BAY LEVEL	BAYVIEW A, BAY LEVEL	BAYVIEW B, BAY LEVEL
8:30–10:00 AM	*Grand Ballroom, Street Level* **IAAI Welcome, Robert S. Engelmore Award, Deployed Application Award Announcements** *Daniel Shapiro, IAAI-11 Conference Chair, Markus Fromherz, IAAI-11 Program Cochair, and David Leake, AI Magazine Editor-in-Chief* **Fellows Announcement, Senior Member Recognition, Feigenbaum Prize, AAAI Classic Paper Award, Distinguished Service Award** *Eric Horvitz, AAAI Past President and Awards Committee Chair; Henry Kautz, AAAI President*			
10:20–11:20 AM	10:20 – 11:20 AM *Grand Ballroom, Street Level* **IAAI-11/AAAI-11 Joint Invited Talk** Building Watson: An Overview of DeepQA for the Jeopardy! Challenge *David Ferrucci (IBM T J Watson Research Center)*			
11:30 AM–12:30 PM	**Relational Probabilistic Models** Abductive Markov Logic for Plan Recognition *Parag Singla, Raymond J. Mooney* Markov Logic Sets: Towards Lifted Information Retrieval Using PageRank and Label Propagation *Marion Neumann, Babak Ahmadi, Kristian Kersting* Coarse-to-Fine Inference and Learning for First-Order Probabilistic Models *Chloé Kiddon, Pedro Domingos*	**A* Search** Block A*: Database-Driven Search with Applications in Any-Angle Path-Planning *Peter Yap, Neil Burch, Rob Holte, Jonathan Schaeffer* Optimal Graph Search with Iterated Graph Cuts *David Burkett, David Hall, Dan Klein* ANA*: Anytime Nonparametric A* *Jur van den Berg, Rajat Shah, Arthur Huang, Ken Goldberg*	**Machine Learning 1** *Nectar:* Quantity Makes Quality: Learning with Partial Views *Nicolò Cesa-Bianchi, Shai Shalev-Shwartz, Ohad Shamir* Symmetric Graph Regularized Constraint Propagation *Zhenyong Fu, Zhiwu Lu, Horace H. S. Ip, Yuxin Peng, Hongtao Lu* Improving Semi-Supervised Support Vector Machines through Unlabeled Instances Selection *Yu-Feng Li, Zhi-Hua Zhou*	**IAAI: Knowledge Access 1 (News Finding)** *Deployed:* NewsFinder: Automating an Artificial Intelligence News Service *Liang Dong, Reid G. Smith, Bruce Buchanan* *Deployed:* The News that Matters to You Design and Deployment of a Personalized News Service *Mark J. Stefik, Lance Good*
1:50-2:50 PM				**IAAI: Planning and Search 1 (Military Operations)** Hybrid Qualitative Simulation of Military Operations *Thomas Hinrichs, Kenneth Forbus, Johan de Kleer, Sungwook Yoon, Eric Jones, Robert Hyland, Jason Wilson* *Deployed:* Learning by Demonstration Technology for Military Planning and Decision Making: A Deployment Story *Karen Myers, Jake Kolojejchick, Carl Angiolillo, Tim Cummings, Tom Garvey, Melinda Gervasio, Will Haines, Chris Jones, Janette Knittel, David Morley, William Ommert, Scott Potter*
3:00–4:00 PM	**Graphical Models** Pushing the Power of Stochastic Greedy Ordering Schemes for Inference in Graphical Models *Kalev Kask, Andrew Gelfand, Lars Otten, Rina Dechter* Stopping Rules for Randomized Greedy Triangulation Schemes *Andrew E. Gelfand, Kalev Kask, Rina Dechter* *Nectar:* Global Seismic Monitoring: A Bayesian Approach *Nimar S. Arora, Stuart Russell, Paul Kidwell, Erik Sudderth*	**Search 1** Optimal Packing of High-Precision Rectangles *Eric Huang, Richard E. Korf* Intrinsic Chess Ratings *Kenneth W. Regan, Guy McC. Haworth* Euclidean Heuristic Optimization *Chris Rayner, Michael Bowling, Nathan Sturtevant*	**Knowledge Representation and Reasoning 1** A Modular Consistency Proof for DOLCE *Oliver Kutz, Till Mossakowski* Relational Blocking for Causal Discovery *Matthew J. H. Rattigan, Marc Maier, David Jensen* A Semantical Account of Progression in the Presence of Uncertainty *Vaishak Belle, Gerhard Lakemeyer*	**IAAI: Intelligence Analysis** Abductive Inference for Combat: Using SCARE-S2 to Find High-Value Targets in Afghanistan *Paulo Shakarian, Margo K. Nagel, Brittany E. Schuetzle, V. S. Subrahmanian* Monitoring Entities in an Uncertain World: Entity Resolution and Referential Integrity *Steven N. Minton, Sofus A. Macskassy, Peter LaMonica, Kane See, Craig A. Knoblock, Greg Barish, Matthew Michelson, Raymond Liuzzi*
4:20–5:20 PM	**Sparse Methods** Sparse Matrix-Variate *t* Process Blockmodels *Zenglin Xu, Feng Yan, Yuan Qi* Sparse Group Restricted Boltzmann Machines *Heng Luo, Ruimin Shen, Changyong Niu, Carsten Ullrich* Efficiently Learning a Distance Metric for Large Margin Nearest Neighbor Classification *Kyoungup Park, Chunhua Shen, Zhihui Hao, Junae Kim*	**Search 2** Inner Regions and Interval Linearizations for Global Optimization *Gilles Trombettoni, Ignacio Araya, Bertrand Neveu, Gilles Chabert* Optimal Route Planning for Electric Vehicles in Large Networks *Jochen Eisner, Stefan Funke, Sabine Storandt* Succinct Set-Encoding for State-Space Search *Tim Schmidt, Rong Zhou*	**Knowledge Representation and Reasoning 2** Causal Theories of Actions Revisited *Fangzhen Lin, Mikhail Soutchanski* Preferred Explanations: Theory and Generation via Planning *Shirin Sohrabi, Jorge A. Baier, Sheila A. McIlraith* Transportability of Causal and Statistical Relations: A Formal Approach *Judea Pearl, Elias Bareinboim*	**IAAI: Security and Privacy** A Machine Learning Based System for Semi-Automatically Redacting Documents *Chad Cumby, Rayid Ghani* Testing Cyber Security with Simulated Humans *Jim Blythe, Aaron Botello, Joseph Sutton, David Mazzoco, Jerry Lin, Marc Spraragen, Michael Zyda*

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Student Reception, 5:45–6:45 PM, Seacliff Foyer, Bay Level / IAAI Google Lab Tour (preregistration required) 6:30–9:30 PM

	SEACLIFF B, BAY LEVEL	SEACLIFF C, BAY LEVEL	SEACLIFF D, BAY LEVEL	GARDEN A, LOBBY LEVEL
9:00–10:00 AM	**AAAI-11 Invited Talk** *Grand Ballroom, Street Level* Registration and Recognition for Robotics *Kurt Konolige (Willow Garage, Inc and Stanford University)*			
10:20–11:20 AM	**Computational Social Choice 2** *Outstanding Paper* Complexity of and Algorithms for Borda Manipulation *Jessica Davies, George Katsirelos, Nina Narodytska, Toby Walsh* Manipulation of Nanson's and Baldwin's Rules *Nina Narodytska, Toby Walsh, Lirong Xia* How to Calibrate the Scores of Biased Reviewers by Quadratic Programming *Magnus Roos, Jörg Rothe, Björn Scheuermann*	**Natural Language Processing 3** Identifying Evaluative Sentences in Online Discussions *Zhongwu Zhai, Bing Liu, Lei Zhang, Hua Xu, Peifa Jia* Partially Supervised Text Classification with Multi-Level Examples *Tao Liu, Xiaoyong Du, Minghui Li, Yongdong Xu, Xiaolong Wang* Exploiting Phase Transition in Latent Networks for Clustering *Vahed Qazvinian, Dragomir R. Radev*	**Multi-Agent Systems 3** Branch and Price for Multi-Agent Plan Recognition *Bikramjit Banerjee, Landon Kraemer* Strategic Information Disclosure to People with Multiple Alternatives *Amos Azaria, Zinovi Rabinovich, Sarit Kraus, Claudia V. Goldman* Coordinated Multi-Agent Reinforcement Learning in Networked Distributed POMDPs *Chongjie Zhang, Victor Lesser*	**Computational Sustainability 2: Economics, Society & Sustainability Impacts** Verifying Intervention Policies to Counter Infection Propagation over Networks … *Ganesh Ram Santhanam, Yuly Suvorov, Samik Basu, Vasant Honavar* Discovering Life Cycle Assessment Trees from Impact Factor Databases *N. Sundaravaradan, D. Patnaik, N. Ramakrishnan, M. Marwah, A. Shah* Modeling and Monitoring Crop Disease in Developing Countries *John Quinn, Kevin Leyton-Brown, Ernest Mwebaze*
11:30 AM–12:30 PM	**Multi-Agent Systems 4** A Kernel-Based Iterative Combinatorial Auction *Sébastien Lahaie* Mechanism Design for Federated Sponsored Search Auctions *Sofia Ceppi, Nicola Gatti, Enrico H. Gerding* M-Unit EigenAnt: An Ant Algorithm to Find the *M* Best Solutions *Sameena Shah, Jayadeva, Ravi Kothari, Suresh Chandra*	**Natural Language Processing 4** Tree Sequence Kernel for Natural Language *Jun Sun, Min Zhang, Chew Lim Tan* A Simple and Effective Unsupervised Word Segmentation Approach *Songjian Chen, Yabo Xu, Huiyou Chang* Lossy Conservative Update (LCU) Sketch: Succinct Approximate Count Storage *Amit Goyal, Hal Daumé III*	**Cost-Sensitive Planning** Planning in Domains with Cost Function Dependent Actions *Mike Phillips, Maxim Likhachev* Heuristic Search for Large Problems with Real Costs *Matthew Hatem, Ethan Burns, Wheeler Ruml* Improving Cost-Optimal Domain-Independent Symbolic Planning *Peter Kissmann, Stefan Edelkamp*	**Description Logics 2** A Closer Look at the Probabilistic Description Logic Prob-*EL* *Víctor Gutiérrez-Basulto, Jean Christoph Jung, Carsten Lutz, Lutz Schröder* Two-Dimensional Description Logics for Context-Based Semantic Interoperability *Szymon Klarman, Víctor Gutiérrez-Basulto* Adding Default Attributes to *EL++* *Piero A. Bonatti, Marco Faella, Luigi Sauro*
1:50–2:50 PM	**AAAI-11 Invited Talk** *Grand Ballroom, Street Level* Strategic Intelligence in Social Networks *Michael Kearns (University of Pennsylvania)*			
3:00–4:00 PM	**Multi-Agent Systems 5** Comparing Agents' Success against People in Security Domains *R. Lin, S. Kraus, N. Agmon, S. Barrett, P. Stone* Parameterized Complexity of Problems in Coalitional Resource Games *Rajesh Chitnis, MohammadTaghi Hajiaghayi, Vahid Liaghat* A Distributed Anytime Algorithm for Dynamic Task Allocation in Multi-Agent Systems *Kathryn S. Macarthur, Ruben Stranders, Sarvapali D. Ramchurn, Nicholas R. Jennings*	**Natural Language Processing 5** Semantic Relatedness Using Salient Semantic Analysis *Samer Hassan, Rada Mihalcea* Using Semantic Cues to Learn Syntax *Tahira Naseem, Regina Barzilay* Integrating Clustering and Multi-Document Summarization by Bi-Mixture Probabilistic Latent Semantic Analysis (PLSA) with Sentence Bases *Chao Shen, Tao Li, Chris H. Q. Ding*	**Reasoning about Plans 1** On Improving Conformant Planners by Analyzing Domain-Structures *Khoi Nguyen, Vien Tran, Tran Cao Son, Enrico Pontelli* A Switching Planner for Combined Task and Observation Planning *Moritz Göbelbecker, Charles Gretton, Richard Dearden* A POMDP Model of Eye-Hand Coordination *Tom Erez, Julian J. Tramper, William D. Smart, Stan C. A. M. Gielen*	**Knowledge and Text** *II:* Cross Media Entity Extraction and Linkage for Chemical Documents *Su Yan, W. Scott Spangler, Ying Chen* *AIW:* SemRec: A Semantic Enhancement Framework for Tag Based Recommendation *Guandong Xu, Yanhui Gu, Peter Dolog, Yanchun Zhang, Masaru Kitsuregawa* *AIW:* Creative Introspection and Knowledge Acquisition: Learning about the World through Introspective Questions and Exploratory Metaphors *Tony Veale, Guofu Li*
4:20–5:20 PM	**Computational Sustainability 3: Energy and Autonomous Traffic Management** Efficient Energy-Optimal Routing for Electric Vehicles *Martin Sachenbacher, Martin Leucker, Andreas Artmeier, Julian Haselmayr* Enforcing Liveness in Autonomous Traffic Management *Tsz-Chiu Au, Neda Shahidi, Peter Stone* Green Driver: AI in a Microcosm *J. Apple, P. Chang, A. Clauson, H. Dixon, H. Fakhoury, M. Ginsberg, E. Keenan, A. Leighton, K. Scavezze, B. Smith*	**Reinforcement Learning 1** Tracking User-Preference Varying Speed in Collaborative Filtering *Ruijiang Li, Bin Li, Cheng Jin, Xiangyang Xue, Xingquan Zhu* An Online Spectral Learning Algorithm for Partially Observable Nonlinear Dynamical Systems *Byron Boots, Geoffrey J. Gordon* Non-Parametric Approximate Linear Programming for MDPs *Jason Pazis, Ronald Parr*	**Reasoning about Plans 2** Planning for Operational Control Systems with Predictable Exogenous Events *Ronen I. Brafman, Carmel Domshlak, Yagil Engel, Zohar Feldman* Extending Classical Planning Heuristics to Probabilistic Planning with Dead-Ends *Florent Teichteil-Königsbuch, Vincent Vidal, Guillaume Infantes* Exploiting Path Refinement Abstraction in Domain Transition Graphs *Peter Gregory, Derek Long, Craig McNulty, Susanne Murphy*	**Perception** *PGAI:* DISCO: Describing Images Using Scene Contexts and Objects *Ifeoma Nwogu, Yingbo Zhou, Christopher Brown* *PGAI:* A Scalable Tree-Based Approach for Joint Object and Pose Recognition *Kevin Lai, Liefeng Bo, Xiaofeng Ren, Dieter Fox* *PGAI:* Recognizing Text through Sound Alone *Wenzhe Li, Tracy Hammond*
EVENING	***Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.***			
	Poster Reception, 6:30–9:30 PM, Grand Ballroom, Street Level *(see page 17)*			

	GOLDEN GATE, BAY LEVEL	MARINA ROOM, BAY LEVEL	BAYVIEW A, BAY LEVEL	BAYVIEW B, BAY LEVEL
9:00–10:00 AM				**IAAI: Machine Learning 1** *Deployed:* Machine Learning and Sensor … *N. Vyas, J. Farringdon, D. Andre, J. Stivoric* Detecting Falls with Location Sensors… *M. Lustrek, H. Gjoreski, S. Kozina, B. Cvetkovic, V. Mirchevska, M. Gams*
10:20–11:20 AM	**Learning Preferences and Social Recommendations** Social Recommendation Using Low-Rank Semidefinite Program *Jianke Zhu, Hao Ma, Chun Chen, Jiajun Bu* Collaborative Users' Brand Preference Mining across Multiple Domains from Implicit Feedbacks *Jian Tang, Jun Yan, Lei Ji, Ming Zhang, Shaodan Guo, Ning Liu, Xianfang Wang, Zheng Chen* Scaling Up Reinforcement Learning through Targeted Exploration *Timothy A. Mann, Yoonsuck Choe*	**Search 3** A Novel Technique for Avoiding Plateaus of Greedy Best-First Search in Satisficing Planning *Tatsuya Imai, Akihiro Kishimoto* The Compressed Differential Heuristic *Meir Goldenberg, Nathan Sturtevant, Ariel Felner, Jonathan Schaeffer* *Nectar:* The Next Best Solution *R. Brafman, E. Pilotto, F. Rossi, D. Salvagnin, K. B. Venable, T. Walsh*	**Knowledge Representation and Reasoning 3** Spectrum-Based Sequential Diagnosis *Alberto Gonzalez-Sanchez, Rui Abreu, Hans-Gerhard Gross, Arjan J. C. van Gemund* The Epistemic Logic Behind the Game Description Language *Ji Ruan, Michael Thielscher* Higher-Order Description Logics for Domain Metamodeling *Giuseppe De Giacomo, Maurizio Lenzerini, Riccardo Rosati*	**IAAI-11 Invited Talk: Robert S. Engelmore Memorial Award Lecture:** Playing with Cases: Rendering Expressive Music Performance with Case-Based Reasoning *Ramon Lopez de Mantaras (Artificial Intelligence Research Institute (IIIA) and Spanish National Research Council (CSIC))*
11:30 AM–12:30 PM	**Density Ratio Estimation and Manifolds** Direct Density-Ratio Estimation with Dimensionality Reduction via Hetero-Distributional Subspace Analysis *Makoto Yamada, Masashi Sugiyama* A Generalised Solution to the Out-of-Sample Extension Problem in Manifold Learning *Harry Strange, Reyer Zwiggelaar* Ordinal Regression via Manifold Learning *Yang Liu, Yan Liu, Keith C. C. Chan*	**Game-Theoretic Solution Techniques** Automated Action Abstraction of Imperfect Information Extensive-Form Games *John Hawkin, Robert Holte, Duane Szafron* Risk-Averse Strategies for Security Games with Execution and Observational Uncertainty *Zhengyu Yin, Manish Jain, Milind Tambe, Fernando Ordóñez* Quick Polytope Approximation of all Correlated Equilibria in Stochastic Games *Liam MacDermed, Karthik S. Narayan, Charles L. Isbell, Lora Weiss*	**Reasoning and Planning and the Web** *AIW:* Continual Planning with Sensing for Web Service Composition *Eirini Kaldeli, Alexander Lazovik, Marco Aiello* *AIW:* Towards Large-Scale Collaborative Planning: Answering High-Level Search Queries Using Human Computation *Edith Law, Haoqi Zhang* *AIW:* Temporal Dynamics of User Interests in Tagging Systems *Dawei Yin, Liangjie Hong, Zhenzhen Xue, Brian D. Davison*	**IAAI: Machine Learning 2** Emerging Applications for Intelligent Diabetes Management *Cindy Marling, Matthew Wiley, Razvan Bunescu, Jay Shubrook, Frank Schwartz* Learning a Skill-Teaching Curriculum with Dynamic Bayes Nets *Derek T. Green, Thomas J. Walsh, Paul R. Cohen*
1:50-2:50 PM				**IAAI: Natural Language** Automatically Mapping Natural Language Requirements to Domain-Specific Process Models *Uthayashankar Thayasivam, Kunal Verma, Alex Kass, Reymonrod Vasquez* The Stock Sonar — Sentiment Analysis of Stocks Based on a Hybrid Approach *Ronen Feldman, Benjamin Rosenfeld, Roy Bar-Haim, Moshe Fresko*
3:00–4:00 PM	**Matrix Approximation, Completion, and Factorization** Multi-Level Cluster Indicator Decompositions of Matrices and Tensors *Dijun Luo, Chris Ding, Heng Huang* A Fast Spectral Relaxation Approach to Matrix Completion via Kronecker Products *Hui Zhao, Jiuqiang Han, Naiyan Wang, Congfu Xu, Zhihua Zhang* Towards Evolutionary Nonnegative Matrix Factorization *Fei Wang, Hanghang Tong, Ching-Yung Lin*	**Social Networks 2** Item-Level Social Influence Prediction with Probabilistic Hybrid Factor Matrix Factorization *Peng Cui, Fei Wang, Shiqiang Yang, Lifeng Sun* *AIW:* Trust Transitivity in Complex Social Networks *Guanfeng Liu, Yan Wang, Mehmet A. Orgun* *AIW:* Identifying Missing Node Information in Social Networks *Ron Eyal, Sarit Kraus, Avi Rosenfeld*	**Knowledge Representation and Reasoning 4** Trajectory Regression on Road Networks *Tsuyoshi Idé, Masashi Sugiyama* Learning from Spatial Overlap *Michael H. Coen, M. Hidayath Ansari, Nathanael Fillmore* Language Splitting and Relevance-Based Belief Change in Horn Logic *Maonian Wu, Dongmo Zhang, Mingyi Zhang*	**IAAI: Data Mining** Accelerating the Discovery of Data Quality Rules: A Case Study *Peter Z. Yeh, Colin A. Puri, Mark Wagman, Ajay K. Easo* Modeling Player Retention in Madden NFL 11 *Ben G. Weber, Michael John, Michael Mateas, Arnav Jhala*
4:20–5:20 PM	**Constraints 1** Core-Guided Binary Search Algorithms for Maximum Satisfiability *Federico Heras, Antonio Morgado, Joao Marques-Silva* Solving Difficult CSPs with Relational Neighborhood Inverse Consistency *Robert J. Woodward, Shant Karakashian, Berthe Y. Choueiry, Christian Bessiere* Extensible Automated Constraint Modelling *Ozgur Akgun, Ian Miguel, Chris Jefferson, Alan M. Frisch, Brahim Hnich*	**Search Engines & Question Answering 1** *AIW:* A Whole Page Click Model to Better Interpret Search Engine Click Data *Weizhu Chen, Zhanglong Ji, Si Shen, Qiang Yang* *AIW:* Artificial Intelligence for Artificial Artificial Intelligence *Peng Dai, Mausam, Daniel S. Weld* *AIW:* Fast Query Recommendation by Search *Qixia Jiang, Maosong Sun*	**Knowledge Representation and Reasoning 5** Progression Semantics for Disjunctive Logic Programs *Yi Zhou, Yan Zhang* An Algebraic Prolog for Reasoning about Possible Worlds *Angelika Kimmig, Guy Van den Broeck, Luc De Raedt* Bounded Forgetting *Yi Zhou, Yan Zhang*	**IAAI: Planning and Search 2** Designing Resilient Long-Reach Passive Optical Networks *Deepak Mehta, Barry O'Sullivan, Luis Quesada, Marco Ruffini, David Payne, Linda Doyle* Online Planning to Control a Packaging Infeed System *Minh Do, Lawrence Lee, Rong Zhou, Lara Crawford, Serdar Uckun*
EVENING	***Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.***			
	Poster Reception, 6:30–9:30 PM, Grand Ballroom, Street Level *(see page 17)*			

	SEACLIFF B, BAY LEVEL	SEACLIFF C, BAY LEVEL	SEACLIFF D, BAY LEVEL	GARDEN A, LOBBY LEVEL
9:00–10:00 AM	**AAAI-11 Invited Talk** *Grand Ballroom, Street Level* Towards Artificial Systems: What Can We Learn from Human Perception? *Heinrich H. Buelthoff (Max Planck Institute for Biological Cybernetics)*			
10:20–11:20 AM	**Computational Sustainability 4: Conservation Planning** *Outstanding Paper:* Dynamic Resource Allocation in Conservation Planning *Daniel Golovin, Andreas Krause, Beth Gardner, Sarah J. Converse, Steve Morey* Policy Gradient Planning for Environmental Decision Making with Existing Simulators *Mark Crowley, David Poole* The Steiner Multigraph Problem: Wildlife Corridor Design for Multiple Species *Katherine Lai, Carla Gomes, Michael Schwartz, Kevin McKelvey, David Calkin, C. Montgomery*	**Reinforcement Learning 2** Differential Eligibility Vectors for Advantage Updating and Gradient Methods *Francisco S. Melo* Basis Function Discovery Using Spectral Clustering and Bisimulation Metrics *Gheorghe Comanici, Doina Precup* Value Function Approximation in Reinforcement Learning Using the Fourier Basis *George Konidaris, Sarah Osentoski, Philip Thomas*	**Reasoning about Plans 3** *Nectar:* Termination and Correctness Analysis of Cyclic Control *Siddharth Srivastava, Neil Immerman, Shlomo Zilberstein* Qualitative Numeric Planning *Siddharth Srivastava, Shlomo Zilberstein, Neil Immerman, Hector Geffner* Conjunctive Representations in Contingent Planning: Prime Implicates versus Minimal CNF Formula *Son Thanh To, Tran Cao Son, Enrico Pontelli*	**Knowledge Based Information Systems** Deriving a Web-Scale Common Sense Fact Database *Niket Tandon, Gerard de Melo, Gerhard Weikum* *AIW:* Commonsense Causal Reasoning Using Millions of Personal Stories *Andrew S. Gordon, Cosmin Adrian Bejan, Kenji Sagae* COSTRIAGE: A Cost-Aware Triage Algorithm for Bug Reporting Systems *Jin-woo Park, Mu-Woong Lee, Jinhan Kim, Seungwon Hwang, Sunghun Kim*
11:30 AM–12:30 PM	**Computational Sustainability 5: Smart Grid & Buildings** Learned Behaviors of Multiple Autonomous Agents in Smart Grid Markets *Prashant P. Reddy, Manuela M. Veloso* Decentralised Control of Micro-Storage in the Smart Grid *Thomas D. Voice, Perukrishnen Vytelingum, Sarvapali D. Ramchurn, Alex Rogers, Nicholas R. Jennings* A Large-Scale Study on Predicting and Contextualizing Building Energy Usage *J. Zico Kolter, Joseph Ferreira Jr.*	**Machine Learning 2** Mean Field Inference in Dependency Networks: An Empirical Study *Daniel Lowd, Arash Shamaei* Efficient Subspace Segmentation via Quadratic Programming *Shusen Wang, Xiaotong Yuan, Tiansheng Yao, Shuicheng Yan, Jialie Shen* Automatic Group Sparse Coding *Fei Wang, Noah Lee, Jimeng Sun, Jianying Hu, Shahram Ebadollahi*	**Reasoning about Plans 4** *Nectar:* Planning with Specialized SAT Solvers *Jussi Rintanen* Exploiting Problem Symmetries in State-Based Planners *Nir Pochter, Aviv Zohar, Jeffrey S. Rosenschein* *PGAI:* Self-Aware Traffic Route Planning *David Wilkie, Jur van den Berg, Ming Lin, Dinesh Manocha*	**Transfer Learning** Selective Transfer between Learning Tasks Using Task-Based Boosting *Eric Eaton, Marie desJardins* Transfer Learning by Structural Analogy *Huayan Wang, Qiang Yang* Heterogeneous Transfer Learning with RBMs *Bin Wei, Christopher Pal*
1:50–2:50 PM	**Computational Sustainability 6: Natural Resources and Ecosystems** Logistic Methods for Resource Selection Functions and Presence-Only Species Distribution Models *Steven J. Phillips, Jane Elith* Water Conservation through Facilitation on Residential Landscapes *Rhonda Hoenigman, Elizabeth Bradley, Nichole Barger* Incorporating Boosted Regression Trees into Ecological Latent Variable Models *R. Hutchinson, L.-P. Liu, T. Dietterich*	**Multitask Learning** Multi-Task Learning in Square Integrable Space *Wei Wu, Hang Li, Yunhua Hu, Rong Jin* Multi-Task Learning in Heterogeneous Feature Spaces *Yu Zhang, Dit-Yan Yeung* Learning Structured Embeddings of Knowledge Bases *Antoine Bordes, Jason Weston, Ronan Collobert, Yoshua Bengio*	**Nectar: RL** A POMDP-Based Optimal Control of P300-Based Brain-Computer Interfaces *Jaeyoung Park, Kee-Eung Kim, Yoon-Kyu Song* Design and Analysis of Value Creation Networks *S. Kameshwaran, Sameep Mehta, Vinayaka Pandit* Recommendation Sets and Choice Queries: There Is No Exploration/Exploitation Tradeoff! *Paolo Viappiani, Craig Boutilier*	**Classification 2** A Nonparametric Bayesian Model of Multi-Level Category Learning *Kevin R. Canini, Thomas L. Griffiths* Convex Sparse Coding, Subspace Learning, and Semi-Supervised Extensions *Xinhua Zhang, Yaoliang Yu, Martha White, Ruitong Huang, Dale Schuurmans* Learning Instance Specific Distance for Multi-Instance Classification *Hua Wang, Feiping Nie, Heng Huang*
3:00–4:00 PM	**Cognitive Modeling** The Influence of Emotion Expression on Perceptions of Trustworthiness in Negotiation *Dimitrios Antos, Celso De Melo, Jonathan Gratch, Barbara Grosz* Co-Training as a Human Collaboration Policy *Xiaojin Zhu, Bryan R. Gibson, Timothy T. Rogers* Human Spatial Relational Reasoning: Processing Demands, Representations, and Cognitive Model *Marco Ragni, Sven Brüssow*	**Reasoning under Uncertainty 1** Memory-Efficient Dynamic Programming for Learning Optimal Bayesian Networks *Brandon Malone, Changhe Yuan, Eric A. Hansen* Dual Decomposition for Marginal Inference *Justin Domke* Efficient Methods for Lifted Inference with Aggregate Factors *Jaesik Choi, Rodrigo de Salvo Braz, Hung H. Bui*	**Integrated Intelligence** Cognitive Synergy between Procedural and Declarative Learning in the Control of Animated and Robotic Agents … *B. Goertzel, J. Pitt, J. Wigmore, N. Geisweiller, Z. Cai, R. Lian, D. Huang, G. Yu* Contextually-Based Utility: An Appraisal-Based Approach at Modeling Framing and Decisions *Jonathan Ito, Stacy Marsella* Combining Learned Discrete and Continuous Action Models *Joseph Z. Xu, John E. Laird*	**Clustering 1** Large Scale Spectral Clustering with Landmark-Based Representation *Xinlei Chen, Deng Cai* Localized *K*-Flats *Yong Wang, Yuan Jiang, Yi Wu, Zhi-Hua Zhou* Learning a Kernel for Multi-Task Clustering *Quanquan Gu, Zhenhui Li, Jiawei Han*
4:20–5:20 PM	**Multidisciplinary Topics** Social Relations Model for Collaborative Filtering *Wu-Jun Li, Dit-Yan Yeung* A Functional Analysis of Historical Memory Retrieval Bias in the Word Sense Disambiguation Task *Nate Derbinsky, John E. Laird* *Nectar:* Two Visual Strategies for Solving the Raven's Progressive Matrices Intelligence Test *Maithilee Kunda, Keith McGreggor, Ashok Goel*	**Reasoning under Uncertainty 2** Utilizing Partial Policies for Identifying Equivalence of Behavioral Models *Yifeng Zeng, Prashant Doshi, Yinghui Pan, Hua Mao, Muthukumaran Chandrasekaran, Jian Luo* When to Stop? That Is the Question *Shulamit Reches, Meir Kalech, Rami Stern* Fast Parallel and Adaptive Updates for Dual-Decomposition Solvers *Özgür Sümer, Umut A. Acar, Alexander T. Ihler, Ramgopal R. Mettu*	**Ranking** *AIW:* CCRank: Parallel Learning to Rank with Cooperative Coevolution *S. Wang, B. Gao, K. Wang, H. Lauw* *AIW:* Maximum Entropy Context Models for Ranking Biographical Answers to Open-Domain Definition Questions *Alejandro Figueroa, John Atkinson* *AIW:* Transfer Learning for Multiple-Domain Sentiment Analysis — Identifying Domain Dependent/Independent Word Polarity *Yasuhisa Yoshida, Tsutomu Hirao, Tomoharu Iwata, Masaaki Nagata, Yuji Matsumoto*	**Ontologies** *Nectar:* New Expressive Languages for Ontological Query Answering *Andrea Calì, Georg Gottlob, Andreas Pieris* Finding Answers and Generating Explanations for Complex Biomedical Queries *Esra Erdem, Yelda Erdem, Halit Erdogan, Umut Oztok* *AIW:* Towards Practical ABox Abduction in Large OWL DL Ontologies *Jianfeng Du, Guilin Qi, Yi-Dong Shen, Jeff Z. Pan*

Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.

	GOLDEN GATE, BAY LEVEL	MARINA ROOM, BAY LEVEL	BAYVIEW A, BAY LEVEL	BAYVIEW B, BAY LEVEL
9:30–10:00 AM				**IAAI: Knowledge Access 2** (9:30 AM) *Deployed:* The Glass Infrastructure: Using Common Sense to Create a Dynamic, Place-Based Social Information System *C. Havasi, R. Borovoy, B. Kizelshteyn, P. Ypodimatopoulos, J. Ferguson, H. Holtzman, A. Lippman, D. Schultz, M. Blackshaw, G. Elliott, C. Ng*
10:20–11:20 AM	**Constraints 2** Distributed Constraint Optimization under Stochastic Uncertainty *Thomas Léauté, Boi Faltings* A Comparison of Lex Bounds for Multiset Variables in Constraint Programming *Y. C. Law, J. H. M. Lee, M. H. C. Woo, T. Walsh* Limits of Preprocessing *Stefan Szeider*	**Search Engines & Question Answering 2** *AIW:* Learning to Suggest Questions in Online Forums *Tom Chao Zhou, Chin-Yew Lin, Irwin King, Michael R. Lyu, Young-In Song, Yunbo Cao* *AIW:* Integrating Community Question and Answer Archives *Wei Wei, Gao Cong, Xiaoli Li, See-Kiong Ng, Guohui Li* *AIW:* Analyzing and Predicting Not-Answered Questions … *Lichun Yang, Shenghua Bao, Qingliang Lin, Xian Wu, Dingyi Han, Zhong Su, Yong Yu*	**Robotics 1** *PGAI:* Autonomous Skill Acquisition on a Mobile Manipulator *George Konidaris, Scott Kuindersma, Roderic Grupen, Andrew Barto* *PGAI:* Understanding Natural Language Commands for Robotic Navigation and Mobile Manipulation *S. Tellex, T. Kollar, S. Dickerson, M. Walter, A. Banerjee, S. Teller, N. Roy* *PGAI:* Multi-Observation Sensor Resetting Localization with Ambiguous Landmarks *Brian Coltin, Manuela Veloso*	**IAAI-11 Invited Talk** HaloBook and Progress Towards Digital Aristotle *David Gunning (Vulcan Inc.)*
11:30 AM–12:30 PM	**Constraints 3** A General Nogood-Learning Framework for Pseudo-Boolean Multi-Valued SAT *Siddhartha Jain, Ashish Sabharwal, Meinolf Sellmann* On the Complexity of BDDs for State Space Search: A Case Study in Connect Four *Stefan Edelkamp, Peter Kissmann* The Inter-League Extension of the Traveling Tournament Problem and its Application to Sports Scheduling *Richard Hoshino, Ken-ichi Kawarabayashi*	**Multilingual Web** *AIW:* Generating True Relevance Labels in Chinese Search Engine Using Clickthrough Data *Hengjie Song, Chunyan Miao, Zhiqi Shen* *AIW:* Detecting Multilingual and Multi-Regional Query Intent in Web Search *Yi Chang, Ruiqiang Zhang, Srihari Reddy, Yan Liu* *AIW:* Cross-Language Latent Relational Search: Mapping Knowledge across Languages *Nguyen Tuan Duc, Danushka Bollegala, Mitsuru Ishizuka*	**Robotics 2** Online Graph Pruning for Pathfinding on Grid Maps *Daniel Harabor, Alban Grastien* Learning Dimensional Descent for Optimal Motion Planning in High-Dimensional Spaces *Paul Vernaza, Daniel D. Lee* Multiagent Patrol Generalized to Complex Environmental Conditions *Noa Agmon, Daniel Urieli, Peter Stone*	
1:50–2:50 PM	**Active Learning** *Nectar:* Effective End-User Interaction with Machine Learning *Saleema Amershi, James Fogarty, Ashish Kapoor, Desney Tan* *AIW:* Active Dual Collaborative Filtering with Both Item and Attribute Feedback *Luheng He, Nathan N. Liu, Qiang Yang* OASIS: Online Active SemI-Supervised Learning *Andrew B. Goldberg, Xiaojin Zhu, Alex Furger, Jun-Ming Xu*	**Game Playing** Reasoning about General Games Described in GDL-II *Stephan Schiffel, Michael Thielscher* Bayesian Learning of Generalized Board Positions for Improved Move Prediction in Computer Go *Martin Michalowski, Mark Boddy, Mike Neilsen* First-Order Logic with Counting for General Game Playing *Lukasz Kaiser, Lukasz Stafiniak*	**Robotics 3** Complete Information Pursuit Evasion in Polygonal Environments *Kyle Klein, Subhash Suri* Automated Abstractions for Patrolling Security Games *Nicola Basilico, Nicola Gatti* Generating Diverse Plans Using Quantitative and Qualitative Plan Distance Metrics *Alexandra Coman, Hector Munoz-Avila*	
3:00–4:00 PM	**Clustering 2** Nonnegative Spectral Clustering with Discriminative Regularization *Yi Yang, Heng Tao Shen, Feiping Nie, Rongrong Ji, Xiaofang Zhou* Transfer Latent Semantic Learning: Microblog Mining with Less Supervision *Dan Zhang, Yan Liu, Richard D. Lawrence, Vijil Chenthamarakshan* Linear Discriminant Analysis: New Formulations and Overfit Analysis *Dijun Luo, Chris Ding, Heng Huang*	**Social Media** Understanding User Migration Patterns in Social Media *Shamanth Kumar, Reza Zafarani, Huan Liu* User-Controllable Learning of Location Privacy Policies with Gaussian Mixture Models *Justin Cranshaw, Jonathan Mugan, Norman Sadeh* Personalizing Your Web Services with Constructive DL Reasoning Join *Freddy Lécué*	**Machine Learning 3** Optimal Rewards versus Leaf-Evaluation Heuristics in Planning Agents *Jonathan Sorg, Satinder Singh, Richard L. Lewis* *Nectar:* End-User Feature Labeling via Locally Weighted Logistic Regression *Weng-Keen Wong, Ian Oberst, Shubhomoy Das, Travis Moore, Simone Stumpf, Kevin McIntosh, Margaret Burnett* Fast Newton-CG Method for Batch Learning of Conditional Random Fields *Yuta Tsuboi, Yuya Unno, Hisashi Kashima, Naoaki Okazaki*	
4:20–5:20 PM	**Learning in Social Media** *AIW:* Propagating Both Trust and Distrust with Target Differentiation for Combating Web Spam *Xianchao Zhang, You Wang, Nan Mou, Wenxin Liang* *AIW:* Predicting Author Blog Channels with High Value Future Posts for Monitoring *S. Wu, T. Elsayed, W. Rand, L. Raschid* *AIW:* Heterogeneous Transfer Learning for Image Classification *Yin Zhu, Yuqiang Chen, Zhongqi Lu, Sinno Jialin Pan, Gui-Rong Xue, Yong Yu, Qiang Yang*	**Feature Selection** Latent Semantic Learning by Efficient Sparse Coding with Hypergraph Regularization *Zhiwu Lu, Yuxin Peng* Size Adaptive Selection of Most Informative Features *Si Liu, Hairong Liu, Longin Jan Latecki, Shuicheng Yan, Changsheng Xu, Hanqing Lu* A Feasible Nonconvex Relaxation Approach to Feature Selection *Cuixia Gao, Naiyan Wang, Qi Yu, Zhihua Zhang*	**Robotics 4** Comparing Action-Query Strategies in Semi-Autonomous Agents *Robert Cohn, Edmund Durfee, Satinder Singh* *PGAI:* Continuous Occupancy Mapping with Integral Kernels *Simon T. O'Callaghan, Fabio T. Ramos* *PGAI:* Learning Accuracy and Availability of Humans Who Help Mobile Robots *Stephanie Rosenthal, Manuela Veloso, Anind K. Dey*	

Coffee breaks will be held at 10:00 – 10:20 AM and 4:00 – 4:20 PM. The lunch break will be held from 12:30 – 1:50 PM.

Exhibit Program

The exhibit program will be held Tuesday – Thursday, August 9 – 11 in the Seacliff Foyer, Bay Level. Exhibit hours are: Tuesday, 11:00 AM – 5:30 PM; Wednesday, 10:00 AM – 5:30 PM; and Thursday: 10:00 AM – 1:00 PM.

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Poster Session

The poster session will be held Wednesday, August 10, in the Grand Ballroom, 6:30 – 9:30 PM.

Main Track Technical Papers

Constraints, Satisfiability, and Search

A General Nogood-Learning Framework for Pseudo-Boolean Multi-Valued SAT
Siddhartha Jain, Ashish Sabharwal, Meinolf Sellmann

Planning in Domains with Cost Function Dependent Actions
Mike Phillips, Maxim Likhachev

Euclidean Heuristic Optimization
Chris Rayner, Michael Bowling, Nathan Sturtevant

Inner Regions and Interval Linearizations for Global Optimization
Gilles Trombettoni, Ignacio Araya, Bertrand Neveu, Gilles Chabert

Knowledge-Based Information Systems

Tracking User-Preference Varying Speed in Collaborative Filtering
Ruijiang Li, Bin Li, Cheng Jin, Xiangyang Xue, Xingquan Zhu

Knowledge Representation and Reasoning

A Semantical Account of Progression in the Presence of Uncertainty
Vaishak Belle, Gerhard Lakemeyer

A Closer Look at the Probabilistic Description Logic *Prob-EL*
Víctor Gutiérrez-Basulto, Jean Christoph Jung, Carsten Lutz, Lutz Schröder

Conjunctive Query Inseparability of OWL 2QLTBoxes
B. Konev, R. Kontchakov, M. Ludwig, T. Schneider, F. Wolter, M. Zakharyaschev

Preferred Explanations: Theory and Generation via Planning
Shirin Sohrabi, Jorge A. Baier, Sheila A. McIlraith

Machine Learning

Selective Transfer between Learning Tasks Using Task-Based Boosting
Eric Eaton, Marie desJardins

OASIS: Online Active SemI-Supervised Learning
Andrew B. Goldberg, Xiaojin Zhu, Alex Furger, Jun-Ming Xu

Linear Discriminant Analysis: New Formulations and Overfit Analysis
Dijun Luo, Chris Ding, Heng Huang

Nonnegative Spectral Clustering with Discriminative Regularization
Yi Yang, Heng Tao Shen, Feiping Nie, Rongrong Ji, Xiaofang Zhou

Transfer Latent Semantic Learning: Microblog Mining with Less Supervision
Dan Zhang, Yan Liu, Richard D. Lawrence, Vijil Chenthamarakshan

Convex Sparse Coding, Subspace Learning, and Semi-Supervised Extensions
Xinhua Zhang, Yaoliang Yu, Martha White, Ruitong Huang, Dale Schuurmans

A Fast Spectral Relaxation Approach to Matrix Completion via Kronecker Products
Hui Zhao, Jiuqiang Han, Naiyan Wang, Congfu Xu, Zhihua Zhang

Multiagent Systems

Complexity of and Algorithms for Borda Manipulation
Jessica Davies, George Katsirelos, Nina Narodytska, Toby Walsh

Automated Action Abstraction of Imperfect Information Extensive-Form Games
John Hawkin, Robert Holte, Duane Szafron

Quick Polytope Approximation of all Correlated Equilibria in Stochastic Games
Liam MacDermed, Karthik Narayan, Charles Isbell, Lora Weiss

Efficiency and Privacy Tradeoffs in Mechanism Design
Xin Sui, Craig Boutilier

Dominant-Strategy Auction Design for Agents with Uncertain, Private Values
David R. M. Thompson, Kevin Leyton-Brown

Risk-Averse Strategies for Security Games with Execution and Observational Uncertainty
Zhengyu Yin, Manish Jain, Milind Tambe, Fernando Ordóñez

Multidisciplinary Topics

Co-Evolution of Selection and Influence in Social Networks
Yoon-Sik Cho, Greg Ver Steeg, Aram Galstyan

The Epistemic Logic Behind the Game Description Language
Ji Ruan, Michael Thielscher

Natural Language Processing

Leveraging Wikipedia Characteristics for Search and Candidate Generation in Question Answering
Jennifer Chu-Carroll, James Fan

Semantic Relatedness Using Salient Semantic Analysis
Samer Hassan, Rada Mihalcea

Using Semantic Cues to Learn Syntax
Tahira Naseem, Regina Barzilay

WikiSimple: Automatic Simplification of Wikipedia Articles
Kristian Woodsend, Mirella Lapata

Reasoning about Plans, Processes, and Actions

Conjunctive Representations in Contingent Planning: Prime Implicates versus Minimal CNF Formula
Son Thanh To, Tran Cao Son, Enrico Pontelli

Reasoning under Uncertainty

When to Stop? That Is the Question
Shulamit Reches, Meir Kalech, Rami Stern

Special Tracks

Artificial Intelligence and the Web

A Whole Page Click Model to Better Interpret Search Engine Click Data
Weizhu Chen, Zhanglong Ji, Si Shen, Qiang Yang

Artificial Intelligence for Artificial Artificial Intelligence
Peng Dai, Mausam, Daniel S. Weld

Commonsense Causal Reasoning Using Millions of Personal Stories
Andrew S. Gordon, Cosmin Adrian Bejan, Kenji Sagae

Transfer Learning for Multiple-Domain Sentiment Analysis — Identifying Domain Dependent/Independent Word Polarity
Yasuhisa Yoshida, Tsutomu Hirao, Tomoharu Iwata, Masaaki Nagata, Yuji Matsumoto

Propagating Both Trust and Distrust with Target Differentiation for Combating Web Spam
Xianchao Zhang, You Wang, Nan Mou, Wenxin Liang

Computational Sustainability and Artificial Intelligence

Green Driver: AI in a Microcosm
Jim Apple, Paul Chang, Aran Clauson, Heidi Dixon, Hiba Fakhoury, Matt Ginsberg, Erin Keenan, Alex Leighton, Kevin Scavezze, Bryan Smith

Policy Gradient Planning for Environmental Decision Making with Existing Simulators
Mark Crowley, David Poole

Dynamic Resource Allocation in Conservation Planning
Daniel Golovin, Andreas Krause, Beth Gardner, Sarah J. Converse, Steve Morey

Discovering Life Cycle Assessment Trees from Impact Factor Databases
Naren Sundaravaradan, Debprakash Patnaik, Naren Ramakrishnan, Manish Marwah, Amip Shah

Decentralised Control of Micro-Storage in the Smart Grid
Thomas D. Voice, Perukrishnen Vytelingum, Sarvapali D. Ramchurn, Alex Rogers, Nicholas R. Jennings

Physically Grounded Artificial Intelligence

A Scalable Tree-Based Approach for Joint Object and Pose Recognition
Kevin Lai, Liefeng Bo, Xiaofeng Ren, Dieter Fox

Understanding Natural Language Commands for Robotic Navigation and Mobile Manipulation
Stefanie Tellex, Thomas Kollar, Steven Dickerson, Matthew R. Walter, Ashis Gopal Banerjee, Seth Teller, Nicholas Roy

EAAI-11

Playing to Program: Towards an Intelligent Programming Tutor for RUR-PLE
Marie desJardins, Amy Ciavolino, Robert Deloatch, Eliana Feasley

Student Abstracts

Learning Compact Representations of Time-Varying Processes
Philip Bachman, Doina Precup

Assessing Quality in the Web of Linked Sensor Data
Chris Baillie, Peter Edwards, Edoardo Pignotti

Medical Treatment Conflict Resolving in Answer Set Programming
Forrest Sheng Bao, Zhizheng Zhang, Yuanlin Zhang

Controlling Selection Bias in Causal Inference
Elias Bareinboim, Judea Pearl

Solving 4x5 Dots-And-Boxes
Joseph K. Barker, Richard E. Korf

Ad Hoc Teamwork in Variations of the Pursuit Domain
Samuel Barrett, Peter Stone

Reconstructing the Stochastic Evolution Diagram of Dynamic Complex Systems
Navid Bazzazzadeh, Benedikt Brors, Roland Eils

Provoking Opponents to Facilitate the Recognition of their Intentions
Francis Bisson, Froduald Kabanza, Abder Rezak Benaskeur, Hengameh Irandoust

Dynamic Batch Mode Active Learning via L_1 Regularization
Shayok Chakraborty, Vineeth Balasubramanian, Sethuraman Panchanathan

Heuristic Planning in Adversarial Dynamic Domains
Simon Chamberland, Froduald Kabanza

Using Neural Networks for Evaluation in Heuristic Search Algorithm
Hung-Che Chen, Jyh-Da Wei

Can Collective Sentiment Expressed on Twitter Predict Political Elections?
Jessica Chung, Eni Mustafaraj

Conflict-Driven Constraint Answer Set Solving with Lazy Nogood Generation
Christian Drescher, Toby Walsh

Probabilistic Plan Graph Heuristic for Probabilistic Planning
Yolanda E-Martín, María D. R-Moreno, David E. Smith

Optimal Subset Selection for Active Learning
Yifan Fu, Xingquan Zhu

Efficient Issue-Grouping Approach for Multi-Issues Negotiation between Exaggerator Agents
Katsuhide Fujita, Mark Klein, Takayuki Ito

Hybrid Tractable Classes of Binary Quantified Constraint Satisfaction Problems
Jian Gao, Minghao Yin, Junping Zhou

Role-Based Ad Hoc Teamwork
Katie Genter, Noa Agmon, Peter Stone

Using Conditional Random Fields to Exploit Token Structure and Labels for Accurate Semantic Annotation
Aman Goel, Craig A. Knoblock, Kristina Lerman

Large Scale Diagnosis Using Associations between System Outputs and Components
Ting Guo, Zhanshan Li, Ruizhi Guo, Xingquan Zhu

On the Discovery and Utility of Precedence Constraints in Temporal Planning
Yanmei Hu, Minghao Yin, Dunbo Cai

Exact Phase Transitions and Approximate Algorithm of #CSP
Ping Huang, Minghao Yin, Ke Xu

Extending the Applications of Recent Real-time Heuristic Search
Daniel Huntley, Vadim Bulitko

Multiple-Instance Learning: Multiple Feature Selection on Instance Representation
I-Hong Jhuo, D. T. Lee

An Event-Based Framework for Process Inference
Michael Joya

Toward Learning to Solve Insertion Tasks: A Developmental Approach Using Exploratory Behaviors and Proprioception
Philip Koonce, Vasha Dutell, José Farrington, Vladimir Sukhoy, Alexander Stoytchev

Time Complexity of Iterative-Deepening A*: The Informativeness Pathology (Abstract)
Levi Lelis, Sandra Zilles, Robert C. Holte

An Empirical Study of Bagging Predictors for Different Learning Algorithms
Guohua Liang, Xingquan Zhu, Chengqi Zhang

An Efficient and Complete Approach for Cooperative Path-Finding
Ryan Luna, Kostas E. Bekris

Generating Explanations for Complex Biomedical Queries
Umut Oztok, Esra Erdem

An Intelligent System for Prolonging Independent Living of Elderly
Bogdan Pogorelc

Evolution of Node Behavior in Link Prediction
Baojun Qiu, Qi He, John Yen

Web Personalization and Cohort Information Services for Natural Resource Managers
Crystal E. Redman

Using Partitions and Superstrings for Lossless Compression of Pattern Databases
Ethan L. Schreiber, Richard E. Korf

Convergence Properties of (mu + lambda) Evolutionary Algorithms
Aram Ter-Sarkisov, Stephen Marsland

On the Effectiveness of Belief State Representation in Contingent Planning
Son Thanh To, Tran Cao Son, Enrico Pontelli

A Bayesian Reinforcement Learning Framework Using Relevant Vector Machines
Nikolaos Tziortziotis, Konstantinos Blekas

A Framework for Integration of Logical and Probabilistic Knowledge
Jingsong Wang, Marco Valtorta

Solution Quality Improvements for Massively Multi-Agent Pathfinding
Ko-Hsin Cindy Wang, Adi Botea, Philip Kilby

Online Updating the Generalized Inverse of Centered Matrices
Qing Wang, Liang Zhang

Modeling Opponent Actions for Table-Tennis Playing Robot
Zhikun Wang, Abdeslam Boularias, Katharina Mülling, Jan Peters

Adaptive Neighborhood Inverse Consistency as Lookahead for Non-Binary CSPs
Robert J. Woodward, Shant Karakashian, Berthe Y. Choueiry, Christian Bessiere

A Local Monte Carlo Tree Search Approach in Deterministic Planning
Fan Xie, Hootan Nakhost, Martin Müller

Discovering Latent Strategies
Xiaoxi Xu

Doctoral Consortium Abstracts

TheAC(C) Language: Integrating Answer Set Programming and Constraint Logic Programming
Forrest Sheng Bao

Joint Inference for Extracting Text Descriptors from Triage Images of Mass Disaster Victims
Niyati Chhaya

Model Update for Automated Planning
Maria Viviane de Menezes, Leliane Nunes de Barros

Long-Term Declarative Memory for Generally Intelligent Agents
Nate Derbinsky

Ensemble Classification for Relational Domains
Hoda Eldardiry

Developing a Language for Spoken Programming
Benjamin M. Gordon

A Probabilistic Trust and Reputation Model for Supply Chain Management
Yasaman Haghpanah

Designing Water Efficient Residential Landscapes with Agent-Based Modeling
Rhonda Hoenigman

Predicting Text Quality for Scientific Articles
Annie Louis

Scaling Up Game Theory: Achievable Set Methods for Efficiently Solving Stochastic Games of Complete and Incomplete Information
Liam MacDermed

Pruning Techniques in Search and Planning (Research Abstract)
Nir Pochter

Learning with Imprecise Classes, Rare Instances, and Complex Relationships
Srinath Ravindran

Modeling the Effects of Emotion on Cognition
Marc Spraragen

Learning Sensor, Space and Object Geometry
Jeremy Stober

Incentive-Compatible Trust Mechanisms (Extended Abstract)
Jens Witkowski

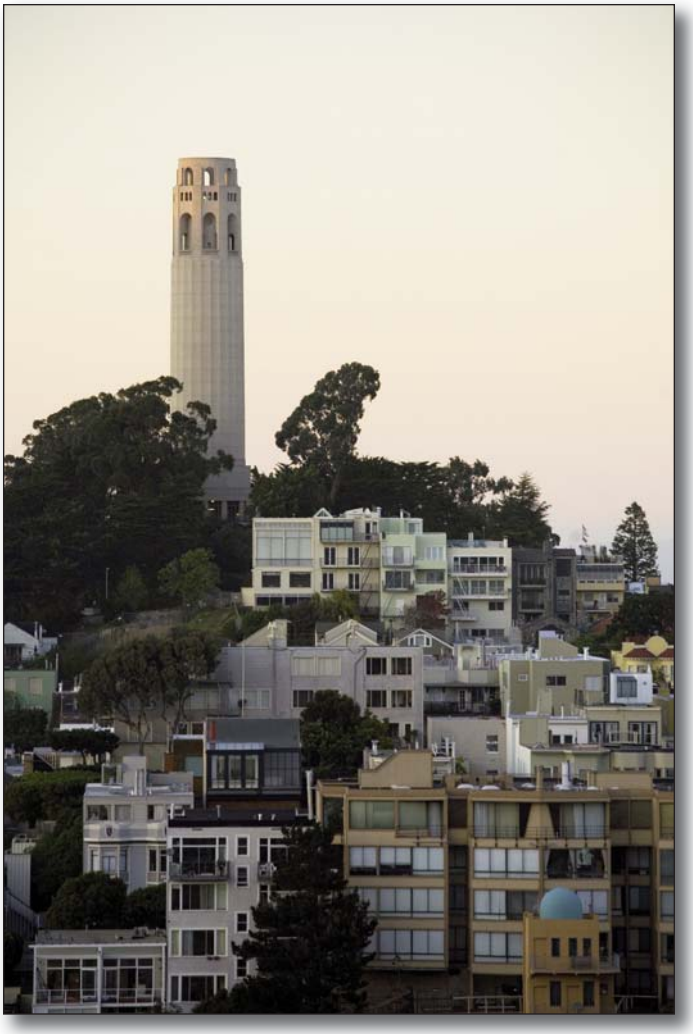
Poker Competition Posters

Results from the 6th Annual Computer Poker Competition
Nolan Bard and Jonathan Rubin

Hyperborean 2011
Computer Poker Research Group: Michael Johanson, Nolan Bard, Michael Bowling, Neil Burch, Richard Gibson, John Hawkin, Rob Holte, Jonathan Schaeffer, Duane Szafron (University of Alberta)

LUCKY7-MAS A Poker Playing Multi Agent System
Bojan Butolen, Simon Zelic, Mitja Cof, Milan Zorman

Metareasoning for Opponent Modeling in Texas Hold'em Poker
Adam Eck, L. Dee Miller, Leen-Kiat Soh



Competitions

AI Video Competition Awards

Monday, August 8, 7:00 PM – 8:00 PM, Grand Ballroom Foyer

The Fifth AI Video Competition Awards Ceremony will be held immediately after the opening reception. Come and see exciting videos about AI research and applications. The winners will be presented with a trophy named a "Shakey" — which honors SRI's pioneering robot.

The objective of this competition is to communicate to the world the fun of pursuing research in AI, and illustrate the impact of some of our applications. Submitters were asked to create narrated videos of 1-5 minutes in length. The submissions were reviewed by an international program committee, led by cochairs David Aha (Naval Research Laboratory) and Arnav Jhala (University of California, Santa Cruz).

Awards will be presented in the following categories: Best Video, Best Student Video, Best Educational Video, Best Narration, Best Short Video, and Most Innovative Video.

AAAI gratefully acknowledges the generous contributions of the *AI Journal* Review Board, Josef Stefan Institute, and VideoLectures.net for their sponsorship.

Computer Poker Competition

Wednesday, August 10, 6:30 PM – 9:30 PM, Grand Ballroom, Street Level

For the Sixth Annual AAAI Computer Poker Competition teams will develop programs for playing heads-up Texas Hold-Em, both limit and no-limit, and 3-player ring limit Texas Hold'em. Programs will be judged based upon their robustness (ability to beat any opponent head-to-head) and/or their ability to learn (to exploit weaker opponents for more money). The winner of a competition will be determined by matches between bots that were submitted to that specific competition. If resources allow, unofficial results will also include matches between all pairs of bots in a division. At AAAI results and posters describing the bots will be presented. AAAI thanks Poker Competition organizers Nolan Bard and Jonathan Rubin for all their efforts in making this event possible, as well as David Parkes, who serves as the impartial "arbiter" for the competition.

Twentieth Annual AAAI Robotics Program

Grand Ballroom Foyer and Regency Ballroom, Street Level, Monday – Wednesday, August 8-10

Twentieth Annual AAAI Robotics Exhibition, Challenges, and Workshop

The 20th Edition of the Robotics Program at AAAI features the long-standing Robotics Exhibitions as well as demonstration and challenges in emerging areas of robotics research. The Robotics Program has a long tradition of demonstrating innovative research in robotics at the intersection with artificial intelligence. This year, the AAAI-11 Robotics Program will feature a workshop, demonstrations from Robotics Education, and two robotics challenge events (Manipulation and Learning by Demonstration).

Embodied Intelligence: The AAAI Robotics Workshop

Monday, August 8
8:00 AM – 5:30 PM

The theme of the workshop aims to cultivate challenge experiments to advance specific problems in robotics research and education. The workshop focuses on how to leverage robotics knowledge and research in other communities through the use of standardized platforms. Very few existing robotics development architectures are used outside of the group developing them. In addition, algorithms and approaches developed in one architecture are rarely ported to another, creating a barrier to reusing good solutions and hampering the ability to validate results in more than one environment. The goal is to create a roadmap to common environments and tools. The workshop will feature presentations by exhibitors in challenge areas that highlight current research.

Learning by Demonstration Challenge

The third annual exhibit and challenge on robot Learning by Demonstration (LbD) brings together research groups to demonstrate complete platforms performing LbD tasks. This year's event has a single challenge task focused on food preparation. The task requires a combination of low-level skills, such as picking up and manipulating objects, and high-level task reasoning. The event will feature five teams tackling this task with the Willow Garage PR2 robot, and one team showing related LbD research on their custom industrial robot.

Challenge Teams

Ecole Polytechnique Federale de Lausanne
Georgia Institute of Technology
Italian Institute of Technology
Massachusetts Institute of Technology
Tufts University
Worcester Polytechnic Institute

Small Scale Manipulation Challenge: Robotic Chess

Fourteen years ago Deep Blue defeated the world chess champion. Yet, it was humans moving the pieces. The second AAAI Small-Scale Manipulation Challenge will highlight advances in embodied intelligence using smaller than human size robots. Robotic chess requires the integration of sensing, planning and actuation and provides an opportunity for performance evaluation on a common, well-defined task.

Challenge Teams

University at Albany
Canisius College
Carnegie Mellon University
RoadNarrows LLC

Robotics Education Track

This venue offers an accessible and flexible opportunity for undergraduate, early graduate, or pre-college student teams to design, implement, and demonstrate an autonomous robotic system. The tasks involved can span physically-embodied AI: exploration, interaction, and learning within an unknown environment. In the long run, the goal is to motivate hands-on AI robotics investigation both for its own sake and in service to other academic disciplines and educational goals.

Exhibition Teams

Aldebaran Robotics
Carnegie Mellon University
University of Kassel
City University New York (2 teams)
Harvey Mudd College

Schedule of Events

Chess Challenge

Matches between all of the chess challenge teams will happen at the following times:

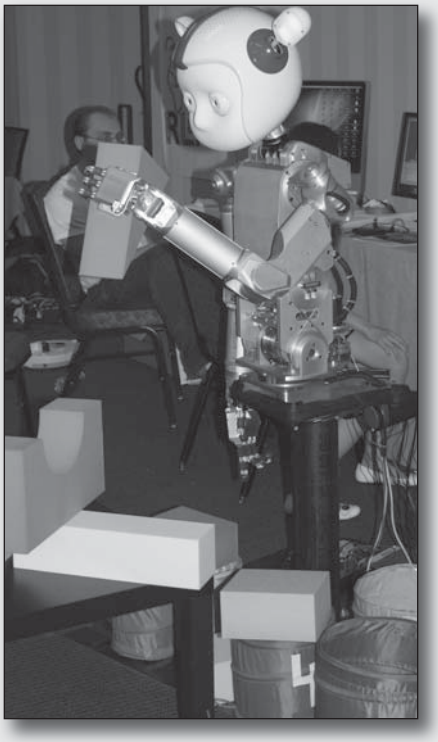
Tuesday, August 9: 9:30 – 11:00 AM
Tuesday, August 9: 3:30 – 5:00 PM
Wednesday, August 10: 9:30 – 11:00 AM

Learning by Demonstration

Since most teams are sharing a common PR2 platform, the LbD challenge will feature each of the six teams showing their entry once for thirty minutes on each day. This will happen at the following times:

Tuesday, August 9
10:00 AM – 10:30 AM
11:00 AM – 11:30 AM
12:30 PM – 1:00 PM
2:00 PM – 2:30 PM
3:00 PM – 3:30 PM
4:00 PM – 4:30 PM

Wednesday, August 10
10:00 AM – 10:30 AM
11:00 AM – 11:30 AM
12:30 PM – 1:00 PM
2:00 PM – 2:30 PM
3:00 PM – 3:30 PM
4:00 PM – 4:30 PM



Robotics Education Track

The Robotics Education Track exhibits will be on display throughout the day:

Tuesday, August 9
10:00 AM – 4:30 PM

Wednesday, August 10
10:00 AM – 4:30 PM

Robot Demonstrations

Robot demonstrations from all categories will be on display Wednesday evening, 6:30 – 9:30 PM.

Robotics Program Organizing Committee

Program Chair

Andrea L. Thomaz (Georgia Institute of Technology)

Learning from Demonstration Challenge Chair

Sonia Chernova (Worcester Polytechnic Institute)

Small Scale Manipulation Challenge: Robot Chess Cochairs

David S. Touretzky (Carnegie Mellon University)
Mike Stillman (Georgia Institute of Technology)

Robotics Education Track Chair

Zach Dodds (Harvey Mudd College)

General Information

ADA Devices

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

Admission

Each conference attendee will receive a name badge upon registration. This badge is required for admittance to the technical, tutorial, IAAI, EAAI, and workshop programs. Tutorial and Workshop attendees must present their attendance tickets for admittance to the rooms. Smoking, drinking and eating are not allowed in any of the technical, tutorial, workshop, IAAI, or EAAI sessions.

Banking

There is an ATM machine located on the Atrium Lobby level of the hotel.The Bank of America, Wells Fargo, Chase, along with several other banks are located within walking distance of the hotel.

Business Center/Shipping

The Hyatt's Business Center is located on the Bay Level and provides services such as photocopying, faxing, secretarial service, pager and cell phone rentals, shipping, computer use and rentals and office supplies. The business center is open 24 hours for hotel guests, who do not require assistance from staff, with access using a guest room key. Staffed Hours: Monday – Friday, 7:30 am – 4:00 pm

Career Information

A bulletin board for job opportunities in the artificial intelligence industry will be made available in the registration area. Attendees are welcome to post job descriptions of openings at their company or institution.

Housing

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

Internet Access

AAAI-11 has arranged for complimentary wireless Internet access for all registrants in the Hyatt meeting spaces and guest rooms. Guests staying overnight will be provided with login information upon check-in to the hotel.

List of Attendees

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

Parking

Valet Parking at the Hyatt is $57.00 with in/out privileges for hotel guests and $62.50 with no in/out privileges for transient guests. For daytime guests, the maximum daily rate is $50.00 plus tax. The first hour is $15.00 and each additional half hour is $7.50. There are several self parking garages and lots in the area. Please inquire at the hotel reception desk for locations.

Printed Materials

Display tables for the distribution of promotional and informational materials of interest to conference attendees will be located in the registration area.

Proceedings CDs

Each technical registrant will receive a ticket with the registration materials for one copy of the conference CD. Tickets can be redeemed in the onsite registration area in the Market Street Foyer, located on the street level of the Hyatt Regency during registration hours. All tickets must be redeemed onsite by Thursday, August 11 at 11:00 am. AAAI cannot mail CDs to registrants after the conference.

Hotel Restaurant

A flyer containing a listing and map of other local restaurants is included in the registration bags. Please also see the hotel lobby or concierge for local restaurants and eateries in the area.

Eclipse Restaurant & Lounge

In the hotel's atrium lobby, Eclipse offers a casual and delicious dining option in a relaxing atmosphere. Full breakfast menu and convenient buffet are offered. Weekdays: 6:00 am – 11:30 am, weekends: 6:00 am – 12:00 pm

Lunch service includes fresh sandwiches, salads, and seasonal specialties. Served daily from 11:30 am – 2:30 pm. Dinner service features a medley of local and international flare sure to satisfy your appetite. Served nightly from 5:30 pm – 10:00 pm

In Room Dining

Opens daily for breakfast at 6:00 am – 10:30 am
Reopens for all day dining 11:30 am – 11:00 pm

Airport Transportation

Lorries Shuttle

Operates 4:00 am – 11:30 pm, seven days a week. Door to door service between SFO Airport and the Hyatt. Price is $16 one way per person. At the airport, look for the White and Green Vans with lettering that says Go Lorrie's at the shuttle pick up area. For information call 415-334-9000. Reservations are required for transportation from the hotel to the airport.

Super Shuttle

Operates 24 hours/seven days a week. Door to door service between San Francisco and the SFO Airport. From the Airport, go to the upper level (median strip or courtesy island) and look for the blue and yellow van. Price is $17 one way. Call 415-558-8500. Contact concierge for further details. Rates are per person.

Bay Porter

Price $34 for first person and $15 for each additional person. Green/white vans with silver letters. Hours: 3:00 am – 10:00 pm. 415-467-1800.

Taxi

Fare is $40 – $45 to San Francisco International Airport.

Budget Rental Car

Located on the street level in Hyatt Regency San Francisco. 415-433-3717.
Mon-Fri 7:30 am – 5:30 pm; Sat 8:00 am – 1:00 pm, Sun 8:00 am – 1:00 pm. Please note this location does accept Drop-Off Cars.

Bay Area Rapid Transit (BART)

$8.10 each way — Exit at Embarcadero from San Francisco International Airport: Any San Francisco bound (north bound) train will stop at "Embarcadero Station". Hotel is located directly outside the station. Trains are available every 15 – 20 minutes.

Hours from Embarcadero Station:
Monday – Friday: 4:55 am – 1:01 am
Saturday: 6:32 am – 1:01 am
Sunday: 8:32 am – 1:01 am

Amtrak

Connecting bus service to trains in Oakland and Emeryville is available across the street from the Hyatt Regency at the Ferry Building. Please see amtrak.com for more information.

Caltrain

Located at 4th and King Streets, approximately 1.5 miles; taxi fare $6.00. Serves the peninsula from San Francisco to Gilroy. See caltrain.com for more information.

Local Transit System:

For more information about public transportation in the city of San Francisco, please see sfmta.com. Rates: MUNI, $2.00; Cable Car, $5.00.

Volunteer Station

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

Workshop Technical Reports and Working Notes

Workshop participants will receive a ticket in their registration envelopes, which can be redeemed for a copy of the AAAI-11 Workshop Program Technical Report Series on CD, containing the papers for all workshops, except W8. For W8 (Generalized Planning), attendees will receive a CD with only the notes for this individual workshop.

Disclaimer

In offering the Hyatt Regency San Francisco, Freeman, San Francisco International Airport, and all other service providers (hereinafter referred to as "Supplier(s)" for the AAAI Conference on Artificial Intelligence and the Innovative Applications Conference), AAAI acts only in the capacity of agent for the Suppliers that are the providers of the service. Because AAAI has no control over the personnel, equipment or operations of providers of accommodations or other services included as part of the AAAI-11/IAAI-11 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, equi pment or instrumentality owned, operated or otherwise used by any Supplier, or (3) any wrongful or negligent acts or omissions on the part of any other party not under the control, direct or otherwise, of AAAI.

Registration

Conference registration is located in Market Street Foyer on the street level of the Hyatt Regency San Francisco, beginning Sunday, August 7. Registration hours are:

Sunday, August 7	7:30 AM – 5:00 PM
Monday, August 8	7:30 AM – 5:00 PM
Tuesday, August 9	8:00 AM – 5:00 PM
Wednesday, August 10	8:30 AM – 5:00 PM
Thursday, August 11	8:30 AM – 12:00 PM

Only checks drawn on U.S. banks, U.S. currency, VISA, MasterCard, American Express, and traveler's checks will be accepted.

Registration Fees

All fees quoted are in US dollars

The AAAI-11/IAAI-11 technical program registration includes admission to all technical paper and poster sessions, invited talks, EAAI-11, exhibits, demos, and competitions, the opening reception, and a copy of the AAAI-11/IAAI-11/EAAI-11 conference proceedings on CD (the hardcopy proceedings is available at additional cost). Students must present proof of full-time student status to qualify for the student rate. Onsite technical program fees are as follows:

Technical Registration Fees

Regular Member	$845	Regular Nonmember	$1015
Student Member	$330	Student Nonmember	$435

AAAI Platinum Fees

(Includes one-, three-, or five-year new or renewal membership in AAAI)

Regular One-Year	$980	Regular Three-Year	$1250
Regular Five-Year	$1520	Student	$395

Symposium on Educational Advances in Artificial Intelligence (EAAI-11)

The AAAI-11/IAAI-11 technical program registration includes participation in EAAI-11 for invited participants and other interested individuals. Although there is no additional cost for this event, registration is required. For nontechnical registrants, an EAAI-only rate is offered.

EAAI-11 only	Regular	$745	Student	$230

Tutorial Forum

The AAAI-11/IAAI-11 technical program registration includes participation in up to four consecutive tutorials. Although there is no additional cost for this event, registration is required.

Workshop Program

Registration includes admittance to one workshop and the AAAI-11 Workshop Technical Report CD. (A CD of working notes only will be available for W8.) Please note that W1 and W12 are two-day workshops.

Workshop with technical program

Regular	$185	Student	$165
Regular 2-Day	$285	Student 2-Day	$250

Workshop Only (no technical program)

Regular	$335	Student	$215
Regular 2-Day	$410	Student 2-Day	$300

Opening Reception (Monday, August 8)

Adult Guest	$65.00	Child	$30.00

Poster Session Reception (Wednesday, August 10)

Adult Guest	$50.00	Child	$25.00

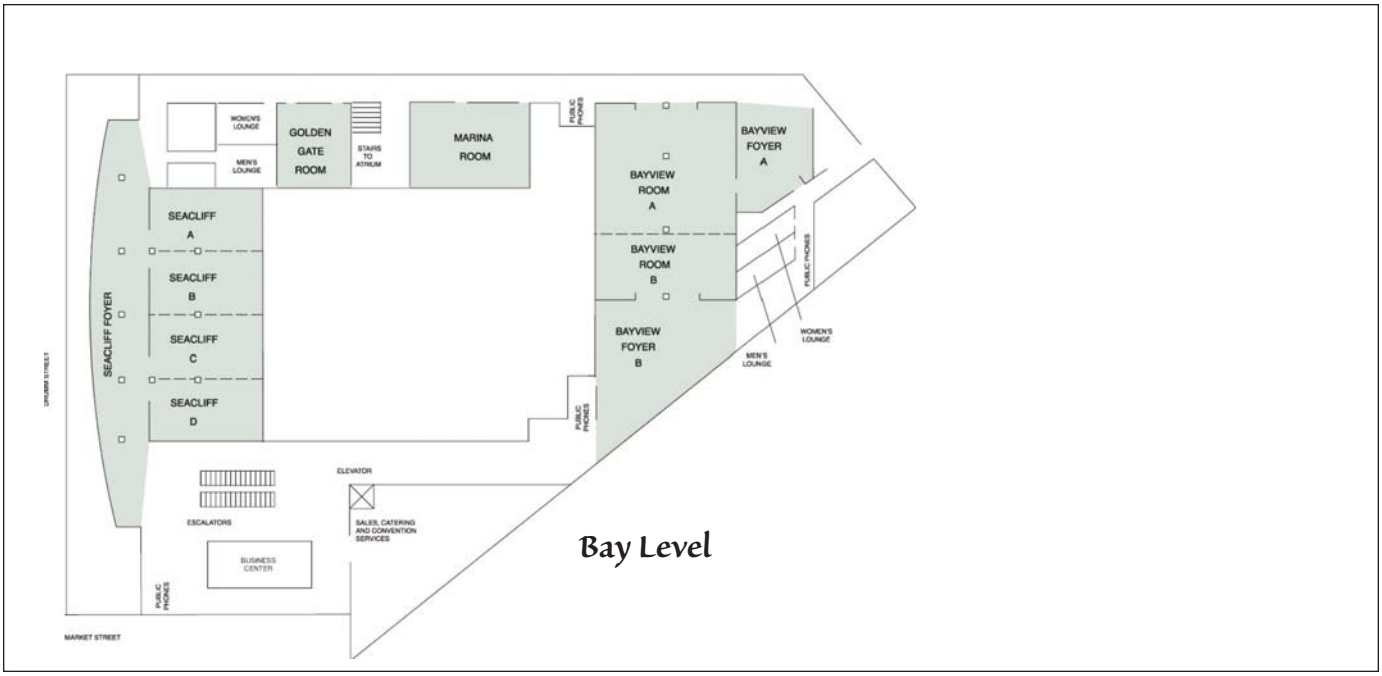
Proceedings

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

Special Conference Rate for hardcopy of proceedings: $95.00 (normally $250.00)

Extra copies of the AAAI-11 / IAAI-11 Proceedings CD and the Workshop Technical Report CD are available in onsite registration.

Special Conference Rate for Proceedings CD or Workshop CD: $25.00 each (normally $39.00)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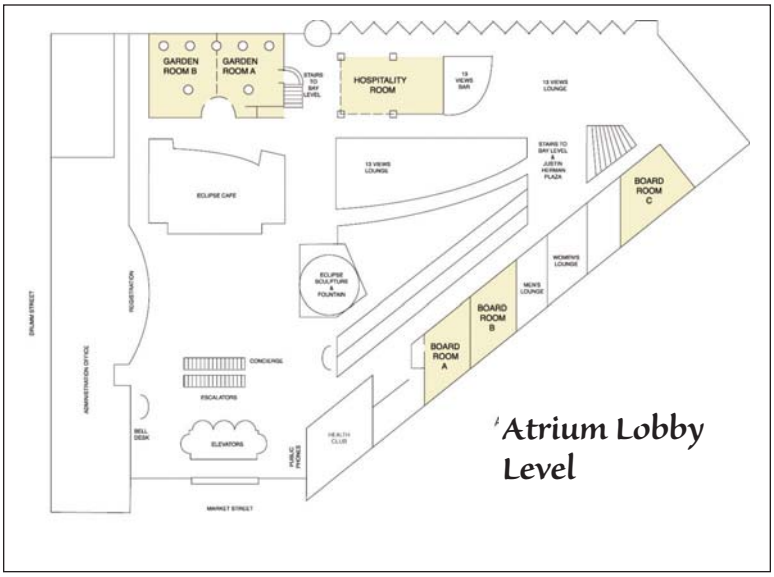
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ECLIPSE SCULPTURE & FOUNTAIN
CONCIERGE
ESCALATORS
ELEVATORS
HEALTH CLUB
PUBLIC PHONES
MARKET STREET
Atrium Lobby Level


AQUATIC PARK
FISHERMAN'S WHARF
JEFFERSON ST
BEACH ST
THE EMBARCADERO
TAYLOR ST
POWELL ST
STOCKTON ST
GRANT ST
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VAN NESS AVE
FERRY BUILDING
HYATT REGENCY SAN FRANCISCO
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CLAY ST
CALIFORNIA ST
BUSH ST
SUTTER ST
POST ST
GEARY ST
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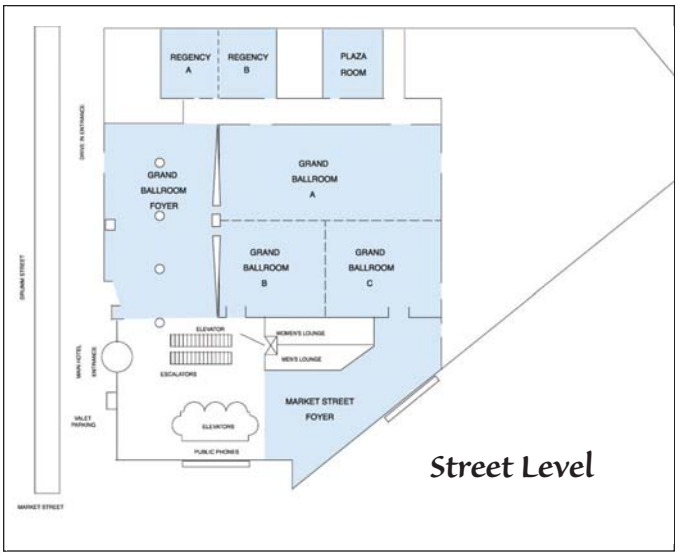
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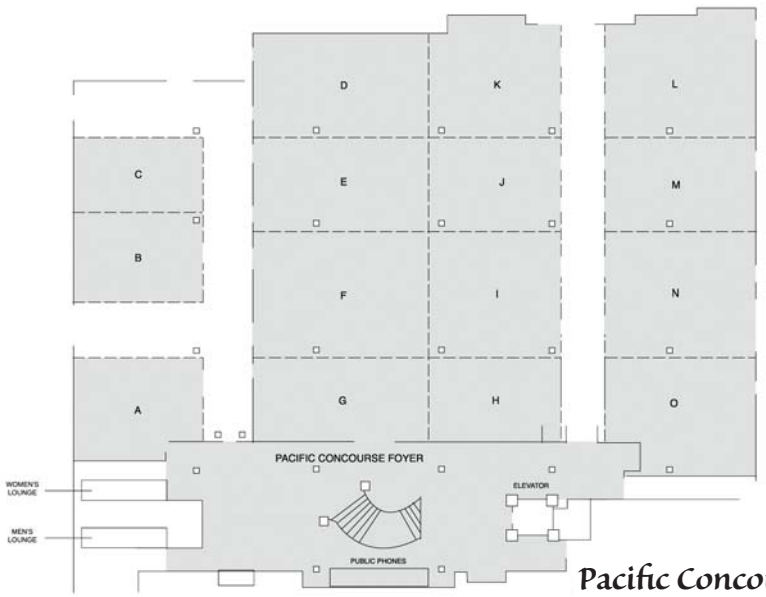
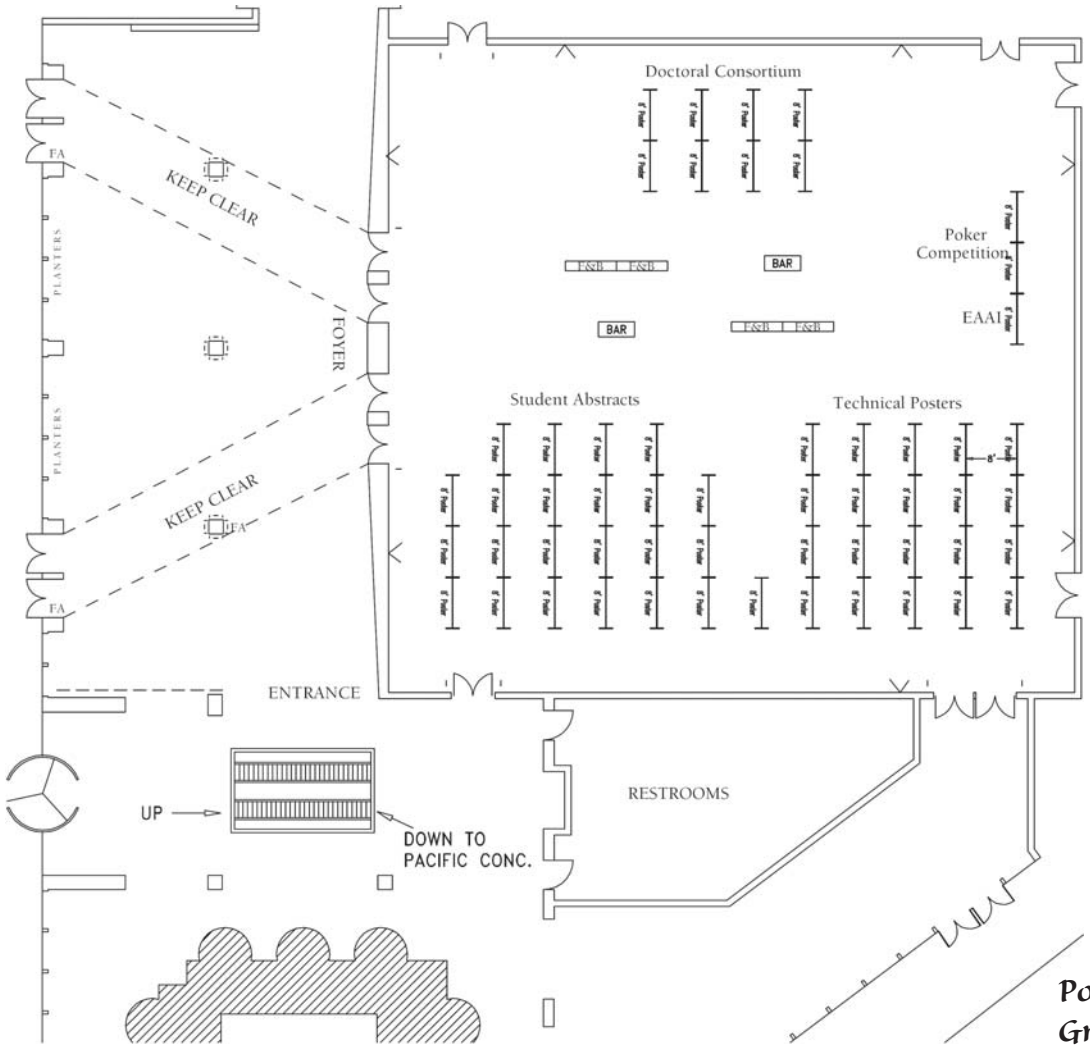
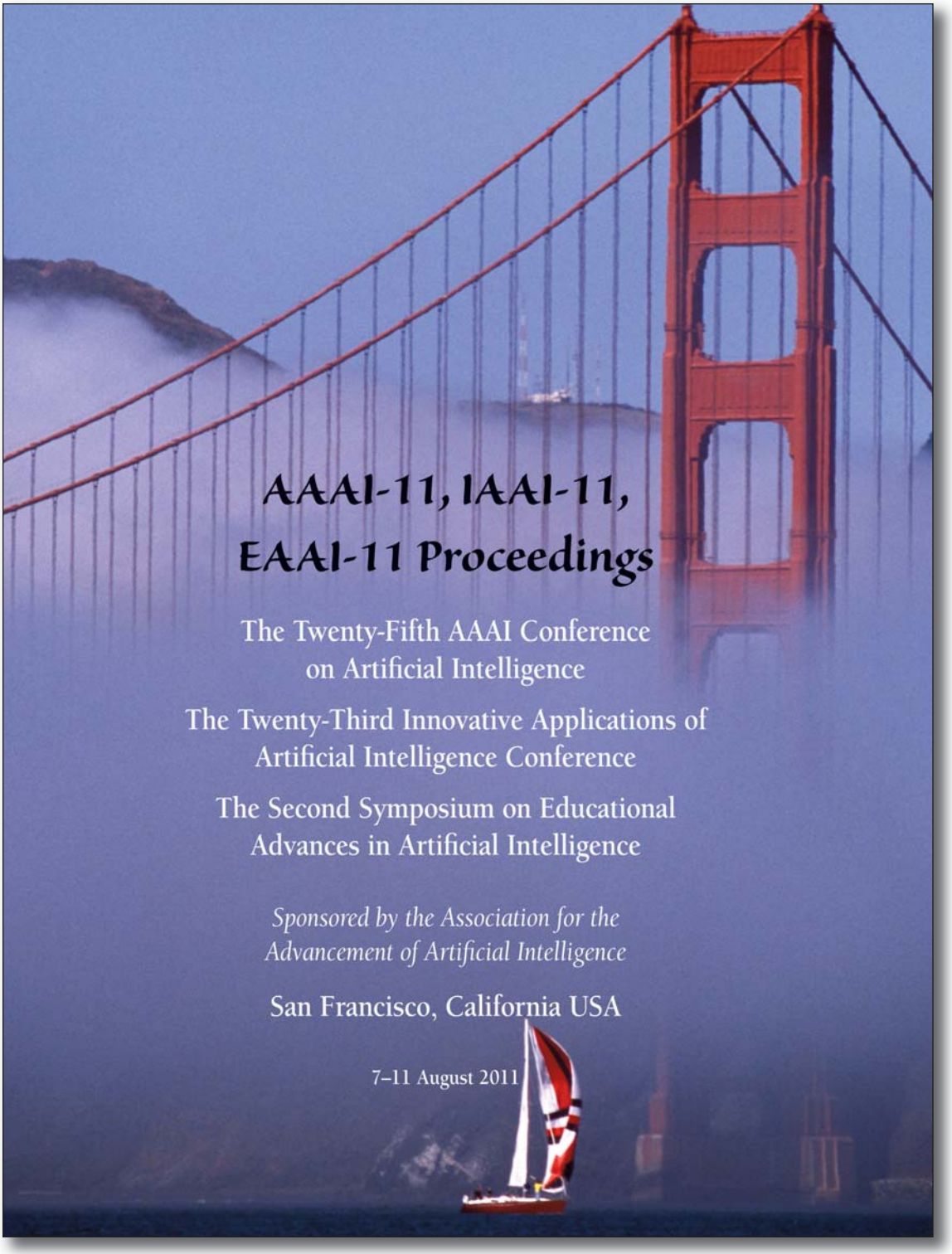


Pacific Concourse Foyer



Poster Session, Grand Ballroom, Street Level



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Special Conference Price
$95.00 (plus shipping)

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