Please join us in the beautiful setting of Edmonton, Canada

for the

Eighteenth National Conference on Artificial Intelligence (AAAI-02)

and the

Fourteenth Innovative Applications of Artificial Intelligence Conference (IAAI-02)

Sponsored by the American Association for Artificial Intelligence
Shaw Conference Centre, Edmonton, Alberta, Canada
July 28– August 1, 2002
ncai@aaai.org • www.aaai.org/ • 650-328-3123

REGISTRATION BROCHURE

You are invited to join us for two premier AI conferences …

AAAI–02

As the premier showcase of AI science and technology, the national conference will start with workshops and free tutorials from leading researchers. This is an outstanding forum to learn about the state of the art in both new and established areas. The conference will then offer 121 technical papers on the best new research and applications across all areas of AI. This year, for the first time, we will have all the papers presented in two specialized poster sessions, graciously treated with food and drinks. You will have the opportunity to meet and talk with the authors of all technical papers. In addition, there will be a single plenary session, presenting a selected set of papers from diverse areas, highlighting the main directions in those areas, and geared towards unifying and sharing information across the AI spectrum. You will also have the opportunity to listen to five invited talks ranging from traditional to unconventional AI.

It is all happening in beautiful Edmonton, a great place for visitors to explore the North Saskatchewan River, which winds through the heart of the city. The long summer days are great for riverside walks, golf, cycling tours and exploring around town. The world famous Banff and Jasper National glacier Parks, which offer outstanding hiking and sightseeing in the summer, are only four hours away. Edmonton is well known as an active arts and drama city. Visitors can participate in a variety of festivals such as Klondike Days (July 18-27), the Heritage Days Festival (Aug. 3-5), the Edmonton Folk Festival (Aug. 8-11) and the Fringe Festival (Aug. 15-25). Edmonton has more than 2000 restaurants and many shopping centers, including North America's largest indoor shopping mall.
Don't miss it!

- Rina Dechter,
Michael Kearns, and
Rich Sutton,
AAAI-02 Program Cochairs

IAAI–02

Tuesday – Thursday, July 30 – August 1

The Fourteenth Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-02) is the premier venue for learning about AI's impact through deployed applications and emerging AI technologies and applications. Case studies of deployed applications with measurable benefits arising from the use of AI technology provide clear evidence of the impact and value that AI technology has in today's world. In addition, IAAI-02 augments these case studies with papers and invited talks that address emerging areas of AI technology and applications. The Emerging Applications track enables developers to learn about tools and techniques enabling the creation of the next generation of AI applications. Through this program, AI researchers will learn about challenges of real-world domains, the utility of specific AI techniques for applications domains, and the difficulties and successes in deploying AI applications in these domains.

IAAI-02 will address the full range of AI techniques, including knowledge-based and case-based systems, language and speech understanding, planning and scheduling, data mining and machine learning, neural networks, genetic algorithms, information retrieval, and other well-established as well as more recently developed areas within AI. In addition, we are pleased to introduce the Entrepreneurs Forum. This event will focus on AI companies: how they are created and lessons learned - for both more recent startups and AI companies with a longer track record.

IAAI is organized in conjunction with the AAAI program, with coordinated schedules and single registration to allow attendees to move freely between IAAI and AAAI sessions. We invite you to contribute to the dialog between basic and applied AI.

We look forward to seeing you in Edmonton!

– Steve Chien, *IAAI-02 Chair*
– John Riedl, *IAAI-02 CoChair*

AAAI conferences promote research among AI researchers, practitioners, scientists, and engineers in related disciplines. The conference provides a forum for a broad range of topics, including knowledge representation and automated reasoning, machine learning and data mining, autonomous agents, robotics and machine perception, probabilistic inference, constraint satisfaction, search and game playing, natural language processing, neural networks, multi-agent systems, computational game theory and cognitive modeling.

Festivities

AAAI-02 Opening Reception

The AAAI-02 opening reception will be held Monday, July 29, 7:00 – 10:00 PM, at Fort Edmonton Park (Canada's largest living history park). This event will provide the traditional opportunity for attendees to socialize in a unique 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-02 registrants including transportation to and from the event. A $25.00 per person fee ($10.00 for children) will be charged for spouses and other nontechnical conference registrants.

Fort Edmonton Park

Upon arrival at Fort Edmonton Park, the attendees will board the 1919 Edmonton Yukon & Pacific Steam Train for a ride "back through time" to the 1846 time era of the Hudson's Bay Fur-Trading Fort. Once at the Fort, attendees will have the opportunity to chat with costumed interpreters and tour through the Trade Store, Rowand House, Married Men's Quarter's, and perhaps even take part in a few lifestyle activities of the time, such as baling furs, beading, throwing a tomahawk, or even trying to light a fire using flint and steel.

Once the attendees have experienced the Fort, they can begin to make their way through the streets, eventually ending up at the Blatchford Field Air Hangar for dinner. Horse drawn transportation, streetcars, "Costumed Edmontonians" and strolling entertainment are just a few of the sights in store for the attendees.

Presidential Address

AI and the Impending Revolution in Brain Science

Tom M. Mitchell,
Carnegie Mellon University

Tom M. Mitchell is the Fredkin Professor of Computer Science at Carnegie Mellon University. He is author of the textbook "Machine Learning," a member of the National Research Council's Computer Science and Telecommunications Board, and President of the AAAI. Mitchell's research over the years has dealt with theoretical and practical issues in machine learning. During 2000-2001 he served as Chief Scientist at WhizBang! Labs, a company that employs machine learning to extract detailed factual information from text. Since returning to Carnegie Mellon, his research has focused on functional Magnetic Resonance Imaging of the human brain. Mitchell is the Founding Director of CMU's Center for Automated Learning and Discovery, an interdisciplinary research center specializing in machine learning and data mining. His web address is www.cs.cmu.edu/~tom.

Technical Poster Sessions

The AAAI-02 Technical Poster sessions will be held on Tuesday, July 30, 5:45 - 8:45 PM, and Wednesday, July 31, 7:00 - 10:00 PM. This new component of the technical program will allow attendees to talk directly with authors about their research in a relaxed and intimate setting. Refreshments will be available both evenings. All AAAI-02 registrants are encouraged to attend these integral portions of the conference.

AI Festival

The AI Festival will be held Wednesday, July 31 from 3:00 PM – 5:30 PM in Exhibit Hall AB of the Shaw Conference Centre. This popular event, first held at AAAI-98, gives attendees the opportunity to stroll among numerous exhibits and demonstrations — the Mobile Robot Competition and Exhibition, the Intelligent Systems Demonstrations, the Student Posters, and a competition between high school Botball competitors and the Robot Building Laboratory participants — all enlivened by refreshments and conversation. Admittance to the reception is free to AAAI-02 registrants. A $15.00 per person fee ($5.00 for children) will be charged for spouses and other nontechnical conference registrants.

AAAI Awards

Each year AAAI honors a small group of its members, authors, and students with a variety of awards, presented at the National Conference. Honors include AAAI Fellow, AAAI Distinguished Service Award, AAAI Classic Paper Award, AAAI Effective Expository Writing Award, the AAAI-02 and IAAI-02 Outstanding Paper Awards, and the Robot Competition Awards. For more information about AAAI awards, please see www.aaai.org/Awards/awards.html. Consult the onsite program for presentation times.

AAAI–02/IAAI–02 Conference Committee

AAAI–02 Program Cochairs
Rina Dechter, *University of California, Irvine*
Michael Kearns, *University of Pennsylvania*
Richard S. Sutton, *AT &T Shannon Laboratory*

IAAI–02 Chair
Steve Chien, *Jet Propulsion Laboratory*

IAAI–02 Cochair
John Riedl, *University of Minnesota*

Intelligent Systems Demos Chair
George Ferguson, *University of Rochester*

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Mark Craven, *University of Wisconsin, Madison*
Sven Koenig, *Georgia Institute of Technology*

Robot Building Laboratory Chair
David Miller, *KISS Institute for Practical Robotics*

SIGART/AAAI 2002 Doctoral Consortium Chair
Marie desJardins, *University of Maryland, Baltimore County*

Tutorial Forum Chair
Michael L. Littman, *AT &T Shannon Laboratory*

Workshop Chair and Cochair
Berthe Y. Choueiry, *University of Nebraska-Lincoln*
Janyce Wiebe, *University of Pittsburgh*

Invited Presentations & Panels

AAAI-02 Invited Talk

Perspectives on Artificial Intelligence Planning

Hector Geffner,
ICREA - Universitat Pompeu Fabra (Barcelona)

Planning has always been a key area in artificial intelligence. In its general form, planning is concerned with the automatic synthesis of action strategies (plans) from a description of actions, sensors, and goals. Planning thus contrasts with two other approaches to intelligent behavior: the programming approach, where action strategies are defined by hand, and the learning approach, where action strategies are inferred from experience.

Different assumptions about the nature of actions, sensors, and costs lead to various forms of planning: (1) Planning with complete information and deterministic actions, (2) planning with non-deterministic actions and sensing, and (3) planning with temporal and concurrent actions, etc. Most work so far has been devoted to "classical" planning (1. above), where significant changes have taken place in the last few years. On the methodological side, the area has become more empirical with experimental evaluation being routine; on the technical side, approaches based on heuristic or constrained-based search have taken over blind-search approaches.

In this talk, Geffner will provide a coherent picture of planning in AI while trying to convey some of the current excitement in the field. He'll make emphasis on the mathematical models that underlie various forms of planning, and the ideas that have been found most useful computationally.

AAAI-02 Invited Talk

Dimension Reduction that Preserves Information and Neural Coding

Naftali Tishby, *The Hebrew University*

Many cognitive functions, such as prediction, feature extraction, noise filtering, and learning, can be viewed as special cases of one principle: compression while preserving information. This information theoretic principle was turned into a computational paradigm: the information bottleneck method. This variational method yielded several novel learning and data analysis algorithms, with many applications to information retrieval as well as to analysis of neural coding in several neurobiological systems, that were carried in Tishby's lab. In this talk Tishby will focus on a new approach to data dimensionality reduction that stems from this principle. Here he searches for low dimensional (non-linear) reduction of co-occurrence (or contingency) tables that preserve the (mutual) information in the table. He gives a new alternate-projection algorithm for achieving such a reduction and show its convergence to an optimal set of information preserving features. This approach is particularly useful when the data is not naturally quantized but rather represented by low dimension continuous features. Such a reduction may have interesting biological implications. (Based on joint work with Amir Globerson and Noam Slonim.)

IAAI-02 Invited Talk

Robot-Assisted Urban Search and Rescue at the WTC: Where's the AI?

Robin R. Murphy, *Computer Science and Engineering, University of South Florida*

On September 11, 2001, the Center for Robot-Assisted Search and Rescue responded within six hours to the WTC disaster; this is the first known use of robots for USAR. The University of South Florida was one of the four robot teams, and only academic institution. The USF team participated on-site in the search efforts from September 12 through 22, collecting and archiving data on the use of robots.

This talk will provide an overview of the use of robots for USAR as well as discuss what AI techniques were available, what was actually used, and why. It will also summarize the key lessons learned from the robotics efforts at the WTC. The lessons learned cover the areas of platforms and mobility, sensors and sensing strategies, control, and human-robot interactions. Possibly the most pervasive lesson learned is that robots for USAR must be considered from an "information technology" perspective, where platforms, sensors, control schemes, networks, and interfaces must all be coevolved to ensure the information extracted by the robots is truly usable by the rescue community.

Extensive video footage of the site and "robot's eye" views will be shown.

AAAI–02 Keynote Address

Probabilistic AI and Information Retrieval

Michael I. Jordan,
Department of Electrical Engineering and Computer Science & Department of Statistics, University of California, Berkeley

Much progress has been made in recent years in the area of information retrieval, in particular as embodied in Internet search engine technology. Much progress has also been made in probabilistic, graph-theoretic AI. What are the possibilities for bringing these two lines of research together — for viewing large-scale information retrieval as a core enabling technology for AI systems, and for asking IR systems to exhibit true inferential capabilities? Jordan will discuss research aimed at bridging the AI/IR gap.

IAAI-02 Invited Panel

Pioneering AI Businesses I: A 20-Year Review

Panel Leader: Neil Jacobstein, *Teknowledge Corporation*

Several AI-based businesses started in the early 1980s. They underwent a classic boom and bust cycle. Hype exceeded expectations, and some investors and technologists lost patience. However, history shows that in cases of disruptive technological innovation, forecasts are usually too optimistic in the short run, and too conservative in the long run. Is that the case with AI businesses? This panel of AI entrepreneurs will review the technology base and history of pioneering AI businesses, extract lessons learned, and identify future opportunities. Companies discussed will include IntelliCorp, Teknowledge, Inference, Syntelligence, Carnegie Group, Cycorp, and others. An interactive question and answer session with panel members will follow brief presentations from each panelist.

IAAI-02 Invited Panel

Pioneering AI Businesses II: Recent Startups

Panel Leader: Craig Knoblock, *Research Associate Professor, University of Southern California and Chief Scientist, Fetch Technologies*

This panel will focus on the process of starting an AI company. The barriers to starting a new company include applying the technology to address a specific market need and creating and running a successful business. The speakers on this panel are AI researchers that have recently started their own companies. Some of the issues to be discussed by the panelists include how to go from a technology to a business, how to get funding for a company, and what are some of the pitfalls to watch out for. An interactive question and answer session with panel members will follow brief presentations from each panelist.

IAAI-02 Invited Panel (Collocated with AI Festival)

PI Entrepreneurs Forum

This forum will provide an open and informal setting for AI pioneers, technologists, entrepreneurs, venture capitalists, legal, and intellectual property experts to network and discuss issues in starting and running AI-based companies. People who would like to provide additional expertise for this forum should contact chien@aig.jpl.nasa.gov.

AAAI-02/IAAI-02 Joint Invited Talk

Human Level "Strong" AI: The Prospects and Implications

Raymond Kurzweil, *KurzweilAI.net (Kurzweil Accelerating Intelligence Network)*

Three-dimensional molecular computing will provide the hardware for human-level "strong" AI well before 2030. The more important software insights will be gained in part from the reverse-engineering of the human brain, a process well under way. Once nonbiological intelligence matches the range and subtlety of human intelligence, it will necessarily soar past it because of the continuing acceleration of information-based technologies, as well as the ability of machines to instantly share their knowledge. The implication will be an intimate merger between the technology-creating species and the evolutionary process it spawned.

Exhibition

The AAAI-02 Exhibition will take place on Tuesday, July 30 and Wednesday, July 31, and will comprise a host of events designed to showcase current products, research and applications in artificial intelligence. Admittance is open to all AAAI-02 registrants. Other interested individuals may visit the exhibits for a nominal onsite fee of $10.00. Student groups are welcome, preferably by prior arrangement. For more information about the exhibition, please visit the AAAI web site or write to ncai@aaai.org.

AAAI-02 Intelligent Systems Demonstrations

Continuing advances in artificial intelligence research are making it possible to develop intelligent systems in a wide range of application areas. The AAAI-02 Intelligent Systems Demonstrations program showcases state-of-the-art AI implementations and provides AI researchers with an opportunity to show their research in action. The program is intended to highlight innovative contributions to the science of AI with an emphasis on the benefits to be gained from developing and using implemented systems in AI research. Previous year's demonstrations have included speech- and gesture-based systems, AI-based simulators and game-playing systems, several systems using AI on the World Wide Web for e-commerce and other applications, and even AI pets. System builders will be on hand to present their work, and audience interaction with the systems is encouraged as much as possible. Demonstrations are scheduled throughout the AAAI Exhibition, as well as being available during the AI Festival. Check the conference program for times and locations.

Mobile Robot Competition and Exhibition

The Eleventh Annual AAAI Mobile Robot Competition and Exhibition brings together teams from colleges, universities and other research laboratories to compete, and also to demonstrate state-of-the-art research in robotics and AI. The goals of the Competition and Exhibition are to:

- Foster the sharing of research ideas and technology
- Allow research groups to showcase their achievements
- Encourage students to enter the fields of robotics and AI
- Increase awareness of the field

Competition

The competition allows teams to show off their best attempts at solving common tasks in a competitive environment. Teams compete for place awards as well as for technical innovation awards, which reward particularly interesting solutions to problems. There will be three contest events this year: Robot Host, Robot Rescue, and the Robot Challenge.

Exhibition

The exhibition gives researchers an opportunity to demonstrate state-of-the-art research in a less structured environment. Exhibits are scheduled throughout the exhibition hall hours.

Workshop

The robot events culminate with a workshop where participants describe the research behind their entries.

Organizing Chairs

General Cochairs

Holly Yanco, *University of Massachusetts Lowell*

Tucker Balch, *Georgia Institute of Technology*

Robot Challenge

Ben Kuipers, *University of Texas at Austin*

Robot Rescue

Jenn Casper, *University of South Florida*

Mark Micire, *University of South Florida*

Robin Murphy, *University of South Florida*

Robot Host

David Gustafson, *Kansas State University*

François Michaud, *Université de Sherbrooke*

Robot Exhibition

Ian Horswill, *Northwestern University*

Robot Workshop

Bill Smart, *Washington University St. Louis*

Exhibitors

Exhibitors will be leading suppliers of AI software, as well as AI consultants and publishers displaying the latest in AI books and periodicals. AAAI-2000 Exhibitors included:

- AAAI Press
- ActivMedia Robotics
- AI Topics - the AAAI Pathfinder
- AK Peters, Ltd.
- Blue Pumpkin Software
- Celcorp
- Franz Inc.
- UWF/Institute for Human and Machine Cognition
- Invention Machine Corporation
- IOS Press, Inc
- IRobot Corporation
- KISS Institute for Practical Robotics
- Kluwer Academic Publishers
- The MIT Press
- Morgan Kaufmann Publishers
- Naval Research Laboratory
- PC AI Magazine
- Probotics, Inc.
- Springer Verlag New York, Inc.
- University of Alberta – AI Lab
- Unmanned Ground Vehicles /Systems JPO

Special & Student Programs

AAAI-02 Robot Building Laboratory

The robot building lab (RBL) is a chance for AI researchers to experiment with hardware. What happens to your favorite AI algorithm when it actually gets embodied? How reliable is the real world compared to a simulation? Why do roboticists always seem to be having a better time at the conference than logic theorists? These are the questions that can best be answered by participating in the RBL.

As in the past, this year's RBL will break the participants into small groups. Each group will be given a robot kit and then will spend the next day and a half creating a robot system to achieve that year's task. The lab will conclude with a friendly competition among the different groups.

The theme for this year's lab will be multi-agent cooperation & manipulation. Each robot kit will contain enough parts to create two or more independent robots that will work together (hopefully) to accomplish the task. Participants are strongly encouraged (but not required) to bring a MacOS, OSX, Windows 98 (or higher), or LINUX laptop with them so that there will be multiple programming stations for each group. A serial port or USB to serial converter is also required. The results of the lab will be presented during the AI Festival on Wednesday afternoon.

The RBL is aimed at educators, students and researchers interested in robotics. A general knowledge of programming will be assumed. No prior robotics experience is required. The RBL will be held Sunday - Monday, July 28 -29. Preregistration is required.

Botball 2002 National Exhibition

No, the graduate students haven't gotten younger! AAAI is pleased to host the National Botball Exhibition, featuring top robots built by middle and high school students from across the country. Botball is a game in which robots attempt to achieve a specified goal, in an exciting head to head, double elimination tournament. The goal of Botball is to get middle and high school students involved in the creative side of technology — to get our upcoming workforce excited about technology, robotics, and AI. Botball involves embodied agent computer programming (in C), mechanical design, science, math, and teamwork.

In this year's tournament, teams either play the black ball or white ball side. The challenge is to score points by moving your colored ping pong balls from inside a moveable goal into the basket or into the end-zone. Robots are required to start by themselves and shut down after 90 seconds. These robots were completely designed, built, and programmed by students from a kit of over 2000 parts. Students first compete in one of 12 regional tournaments and then advance to the National Botball Tournament held in Norman, Oklahoma in early July. The best of the best from that tournament will be showcasing their robots at AAAI this year. For more information about the Botball program, please see: www.botball.org

Student Abstract Poster Program

The Student Abstract Program is designed to provide a forum in which students can present and discuss their work while still in its early stages, meet peers who have related interests, and introduce themselves to more senior members of the field. Student abstracts, which have been chosen for inclusion in the AAAI-02 conference proceedings, will display their work at the Student Abstract Poster Session during the AI Festival on Wednesday, July 31, from 3:00 – 5:30 pm in Exhibit Hall AB of the Shaw Conference Centre. All AAAI-02 registrants are encouraged to visit these presentations.

Doctoral Consortium

The Seventh AAAI/SIGART Doctoral Consortium will be held Sunday and Monday, July 28 - 29, from 8:30 am - 6:00 pm. 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 students accepted to participate in this program will also participate in the Student Poster program on Wednesday, July 31, from 3:00 – 5:30 pm during the AI Festival. All interested AAAI-02 student registrants are invited to observe the presentations and participate in discussions at the workshop. AAAI and ACM/SIGART gratefully acknowledge a grant from NSF's Directorate for Computer and Information Science and Engineering (CISE) that partially supports student travel to the event.

Collocated Events in Edmonton

Several conferences have elected to collocate with AAAI in Edmonton this summer. AAAI attendees will enjoy discounts at several, including IAAI, KDD, SARA, and UAI:

- Fourteenth Conference on Innovative Applications of Artificial Intelligence (IAAI-02), July 30 - August 1, www.aaai. org/Conferences/IAAI/2002/iaai02.html
- The Third Annual Canadian Database Research Workshop (CanDB), July 22, db.cs.ualberta.ca/candb
- Third International Conference on Computers and Games (CG'02), July 25-27, www.cs.ualberta.ca/~cg2002
- International Database Engineering and Applications Symposium (IDEAS'02), July 17-19, database.cs.ualberta.ca/ideas02
- Tenth Annual Conference on Intelligent Systems for Molecular Biology (ISMB 2002), August 3-7, www.ismb02.org
- The Eighth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2002), July 23-26, www.acm.org/ sigkdd/kdd2002
- Symposium on Abstraction, Reformulation and Approximation (SARA 2002), Kananaskis Mountain Lodge, Kananaskis, Alberta, Canada, August 2-4, www.cs.ualberta.ca/~holte/SARA2002
- Association for Uncertainty in Artificial Intelligence (UAI '02), August 1-4, www.cs.ucla.edu/~uai02

For more information about collocated events, please see www.cs.ualberta.ca/Edmonton2002/ or visit the individual conference web site.

Tutorial Forum

The 2002 Tutorial Forum features 10 four-hour tutorials and two eight-hour tutorials that provide an opportunity for researchers to spend two days freely exploring exciting advances in disciplines outside their normal focus. All AAAI attendees are encouraged to participate in this continuing education program. Each tutorial is taught by experienced scientists and practitioners in AI. AAAI-02 technical registrants may register for up to four consecutive tutorials for no additional fee.

Sunday, July 28, 9:00 AM - 1:00 PM

- SA1: The State of the Art in Language Modeling — Joshua Goodman and Eugene Charniak
- SA2: AI in Space: Unique Challenges and Opportunities (Full Day) — Daniel Clancy
- SA3: Greedy On-Line Planning and Its Application to Mobile Robotics — Sven Koenig and Anthony Stentz
- SA4: Aspects of Qualitative Spatial and Temporal Reasoning — Gerard Ligozat, Frank D. Anger, and Hans W. Guesgen

Sunday, July 28, 2:00 - 6:00 PM

- SP1: Practical Approaches to Handling Uncertainty in Planning and Scheduling — J. Christopher Beck and Thierry Vidal
- SP2: Collaborative Multi-Agent Systems — Barbara Grosz and Charlie Ortiz
- SP3: Practical Machine Learning for Software Engineering — Tim Menzies and Gary D. Boetticher

Monday, July 29, 9:00 AM - 1:00 PM

- MA1: Information Integration on the Web — Craig Knoblock and Subbarao Kambhampati
- MA2: AI Techniques for Personalized Recommendation (Full Day) — Anthony Jameson, Joseph Konstan and John Riedl
- MA3: Algorithms for Combinatorial Auctions and Exchanges — Tuomas Sandholm

Monday, July 29, 2:00 – 6:00 PM

- MP1: Phase Transitions and Structure in Combinatorial Problems — Tad Hogg, Carla P. Gomes, Toby Walsh, and Weixiong Zhang
- MP2: Rational Action in Autonomous Agents — Michael Wooldridge and Simon Parsons

Algorithms for Combinatorial Auctions and Exchanges (MA3)

Tuomas Sandholm
Monday, July 29, 9:00 AM - 1:00 PM

The last three years have witnessed a leap of improvement in market clearing algorithms both for traditional market designs and entirely new market designs enabled by advanced clearing technology. This tutorial covers the computational implications of different market designs and presents algorithms for clearing markets optimally and approximately. Auctions, reverse auctions, and exchanges (many-to-many auctions) will be covered, with both theoretical and experimental results. Multi-item and multi-unit markets will be a key focus and computational implications of different classes of side constraints will be presented. Bid types covered include price-quantity bids, different shapes of supply/demand curves, and combinatorial bids. A new method for selective preference elicitation for combinatorial markets will also be presented.

Tuomas Sandholm is associate professor of computer science at Carnegie Mellon University. He received his Ph.D. and M.S. degrees in computer science from the University of Massachusetts at Amherst in 1996 and 1994. He earned an M.S. (B.S. included) with distinction in industrial engineering and management science from the Helsinki University of Technology, Finland, in 1991. He has eleven years of experience building electronic marketplaces. Several of his systems have been commercially fielded. He has published over 120 technical papers, and received numerous academic awards, including the NSF Career Award and the inaugural Autonomous Agents Research Award.

AI in Space: Unique Challenges and Opportunities (SA2)

Daniel J. Clancy
Sunday, July 28, 9:00 AM - 6:00 PM (full day)

Since the earliest days of the field, space has sparked the imagination of AI researchers due to the unique challenges that this environment poses. Within NASA, there is a growing awareness that smarter, more adaptive systems are critical to NASA for completing many of the challenging missions planned for the future. These missions include long duration, robotic exploration of Mars; the robotic deployment and maintenance of large optical telescopes for imaging of earth-like planets; mobile, intelligent crew assistants for use on the International Space Station (ISS), and many others.

In this tutorial, a combination of AI researchers and NASA mission experts will present a variety of NASA problems and the interesting and unique research challenges that various mission classes offer to AI researchers. Each presentation will start with a discussion of a problem posed by the mission followed by a more in-depth discussion of the research challenges presented as well as on-going research designed to address these challenges. Furthermore, it will identify resources that NASA is making available to the broader research audience such as data sets and simulations. The presentations will pay particularly close attention to the on-going Mars program due to the unique opportunities it offers. Research topic areas that are relevant include autonomy, health management, planning and scheduling, agent architectures, human-centered systems, intelligent data understanding and others.

Daniel Clancy is the division chief of the computational sciences division at NASA Ames and was previously a researcher in the Autonomy and Robotics area. The tutorial will draw on material by a variety of AI researchers and NASA mission experts.

AI Techniques for Personalized Recommendation (MA2)

Anthony Jameson, Joseph Konstan, and John Riedl
Monday, July 29, 9:00 AM - 6:00 PM (full day)

Personalized recommendation of products, documents, and collaborators has become an important way of meeting user needs in commerce, information provisioning, and community services, whether on the web, through mobile interfaces, or through traditional desktop interfaces. This tutorial first reviews the types of personalized recommendation that are being used commercially and in research systems. It then systematically presents and compares the underlying AI techniques, including recent variants and extensions of collaborative filtering, demographic and case-based approaches, and decision-theoretic methods. The properties of the various techniques will be compared within a general framework, so that participants learn how to match recommendation techniques to applications and how to combine complementary techniques.

The full-day format will make it possible to include a session in which participants actively work together on a concrete problem, as well as in-depth discussion of application contexts, case studies, and key social issues. The tutorial presupposes a general knowledge of AI. Some previous familiarity with issues of personalized recommendation is desirable but not essential.

Anthony Jameson is a principal researcher at DFKI (the German Research Center for Artificial Intelligence) and adjunct professor of computer science at the International University. He has published widely on personalized recommendation and user adaptation since the early 1980s. He has presented related tutorials at CHI, IJCAI, IUI, and UM conferences.

Joe Konstan and John Riedl are Associate Professors in the Department of Computer Science and Engineering at the University of Minnesota. John Riedl cofounded the pioneering GroupLens recommender system project with Paul Resnick in 1992, and he and Joe Konstan have been codirecting the project since 1995. Riedl and Konstan also cofounded Net Perceptions, a company that has commercialized the results of their research since 1996. They have published broadly in the area of recommender systems, and they have presented related tutorials at the ACM conferences on E-Commerce and on Computer-Supported Cooperative Work.

Aspects of Qualitative Spatial and Temporal Reasoning (SA4)

Gerard Ligozat, Frank Anger and Hans Guesgen
Sunday, July 28, 9:00 AM - 1:00 PM

Space and time are ubiquitous parameters of our knowledge about the world. Qualitative spatial and temporal reasoning methods have evolved in order to reason about space and time when precise qualitative information is either superfluous or unavailable. The potential applications of the field include natural language understanding, planning, GIS, robotics, and human-machine communication.

This tutorial will guide practitioners by describing the main methods and results in the field, including: basic formalisms modeling time (including nonlinear ones) and space; tractability results in qualitative spatial and temporal calculi; fuzzy extensions of the calculi; applications.

The tutorial is suitable for all researchers interested in an overview of the current state of the art in the domain. It assumes only a basic knowledge of AI and knowledge representation techniques. Required background will be introduced when required.

Frank Anger is Program Director and Acting Deputy Division Director at NSF. He holds degrees from Princeton, Cornell and Florida and held professorships at several universities before joining NSF. He has published over 50 papers covering a wide range of topics and is a founding member of three professional organizations.

Hans Guesgen is an associate professor in computer science at the University of Auckland. His areas of research include spatio-temporal reasoning and constraint satisfaction, with more than 50 publications in these areas. He coorganized and cochaired various workshops on spatial and temporal reasoning.

Gerard Ligozat is a professor of computer science at the University of Paris at Orsay, France. His fields of interest include temporal and spatial representation and reasoning in connection with formal and natural language issues. Along with many publications, he authored or coauthored two books on knowledge representation.

Collaborative Multi-Agent Systems (SP2)

Barbara Grosz and Charlie Ortiz
Sunday, July 28, 2:00 - 6:00 PM

Systems that are able to act as collaborative partners on joint tasks have the potential to greatly improve human-computer interaction and productivity. Such collaborative systems are within reach thanks to progress in our understanding of rationality, both collective and individual. This tutorial will describe both the major theoretical advances that can support the principled designs of such systems as well as describe implementations based on these theories.

The tutorial will begin with an overview of rationality: what it means for an agent to be rational and how this can be reflected in agent designs. This will include a brief review of models of mental state: for example, the representation and role of intentions and the relation of intentions to other attitudes such as that of belief. Then, Grosz and Ortiz will consider information flow within agent architectures, emphasizing considera-

tions of resource-boundedness and the ways this affects formalizations and system designs. The tutorial will then examine a range of approaches to modeling the collaborative behavior of a group of agents on a joint task. Several formal computational models will be presented and examined in light of major philosophical approaches. The formal models require the introduction of new notions of intention, ability, and helpful behavior. These new notions will be examined, as will ways to model stages of partiality in joint planning processes. The relationship of this work to work in distributed AI will be discussed briefly. Finally, applications to human-computer communication and planning will be discussed.

This tutorial is suitable for a general AI audience. Knowledge of AI planning would be helpful. It should be of interest to: researchers in distributed AI; those interested in the theoretical aspects of collaboration; and those interested in designing and building collaborative information systems, user interfaces, and planning systems.

Barbara Grosz is a Gordon McKay Professor of Computer Science at Harvard University and is a past president of AAAI. Her research addresses fundamental problems in modeling collaborative activity and in developing computer systems able to collaborate with each other and their users. She is one of the inventors of the SharedPlans model of collaboration. She is extending this model and using it to construct collaborative interfaces and computer agents that work together in teams.

Charlie Ortiz is Progam Manager of Collaboration Science and Technology at the AI Center of SRI International. His research centers on understanding the connections between mind and action, from both planning and explanatory perspectives. At SRI he leads projects in distributed robotics and negotiation for multiagent systems. As a postdoctoral fellow at Harvard, his research focused on models of collaboration. His Ph.D. in computer science from the University of Pennsylvania was for his work on causation.

Greedy On-line Planning and its Application to Mobile Robotics (SA3)

Sven Koenig and Anthony Stentz
Sunday, July 28, 9:00 am - 1:00 pm

Mobile robots must be able to make good decisions in complex situations that involve a substantial degree of uncertainty, yet find solutions in a timely manner despite a large number of potential contingencies. Unfortunately, planning in nondeterministic domains is typically time-consuming due to the large number of contingencies. Greedy on-line planning interleaves planning and plan execution, which speeds up planning by sacrificing the optimality of the resulting plans. It has advantageous properties, like not needing to be in control of the robot at all times and being easy to integrate into complete robot architectures.

This tutorial covers algorithms, their analysis using a unifying graph-theoretic framework (including complexity results), and their integration into complete robot architectures. Robot navigation in initially unknown terrain will be used as a running example. Koenig and Stentz describe complete robot systems for this application and show videos of their operation. The tutorial is completely self-contained and teaches the necessary knowledge from mobile robotics, artificial intelligence, graph theory, and algorithm theory. It should be of interest to both experimental and theoretical researchers that work in the areas of mobile robotics, artificial intelligence planning, search, and online algorithms.

Sven Koenig is an assistant professor at Georgia Institute of Technology. He received his Ph.D. degree from Carnegie Mellon University for his dissertation on "Goal-Directed Acting with Incomplete Information." He also holds M.S. degrees from the University of California at Berkeley and Carnegie Mellon University as well as German degrees in management science and computer science. Koenig has published over 50 journal articles, conference papers, and technical reports. He is the recipient of various awards and fellowships, including the NSF CAREER award, an IBM Faculty Partnership Award, the Raytheon Faculty Fellowship Award from Georgia Tech, the Tong Leong Lim Pre-Doctoral Prize from the University of California at Berkeley, and a Fulbright Fellowship.

Anthony Stentz is a senior research scientist in the Robotics Institute at Carnegie Mellon University. He received his B.S. in physics from Xavier University in 1982, his M.S. in computer science from Carnegie Mellon University in 1984, and his Ph.D. in computer science from CMU in 1989. Stentz has made contributions in a broad range of research areas, including robotics, software architecture, intelligent planning, sensing, and perception. He is best known for developing D*, a real-time planning algorithm for unknown, uncertain, and changing environments that has been used in dozens of robot systems around the world. Stentz has published over 100 journal articles, conference papers, technical reports, patents, and videos. He is the recipient of the Alan Newell Award for Research Excellence.

Information Integration on the Web (MA1)

Craig Knoblock and Subbarao Kambhampati
Monday, July 29, 9:00 AM - 1:00 PM

The explosive growth and popularity of the world-wide web resulted in thousands of structured queryable information sources on the Internet, and the promise of unprecedented information-gathering capabilities to lay users. Unfortunately, the promise has not yet been transformed into reality. While there are sources relevant to virtually any user-queries, the morass of sources presents a formidable hurdle to effectively accessing the information. One way of alleviating this problem is to develop web-based information integration agents, which take the user's query and access the relevant sources to answer the user's query efficiently.

This tutorial will survey the recent research and systems for web-based information integration. Knoblock and Kamphampati will start with an overview of the wide range of technical problems that must be addressed to integrate the diverse sources. They will then describe approaches from both the database and artificial intelligence communities that address these various problems. Specific topics include the rela-

tionship to database integration and information retrieval, languages for mediation and exchange, local-as-view versus goal-as-view models of information sources, machine learning techniques for generating wrappers, terminology alignment for combining data across sources, adaptive query optimization and execution, the role of XML and the semantic web initiative. Knoblock and Kamphampati also describe the various integration systems and where they fit in within the space of technical approaches, and discuss important application areas, such as bioinformatics and spatial database integration.

Craig Knoblock received his Ph.D. in computer science from Carnegie Mellon University in 1991 and joined University of Southern California that year. He is currently a senior project leader at the Information Sciences Institute and a research sssociate professor in computer science. His current research interests include information agents, information integration, automated planning, and machine learning. He leads the Information Agents Research Group, which is addressing the problems of building agents for integrating and managing web-based information sources.

Subbarao Kambhampati is a professor of Computer Science and Engineering at Arizona State University, where he directs the YOCHAN research group. He has published close to a hundred technical articles on planning, learning, CSP and, more recently, information integration and query optimization. His work on information integration includes the development of the Emerac and Havasu integration frameworks. He also developed and taught a course on information integration at ASU. He was a 1994 NSF Young Investigator and a 1996 AAAI invited speaker.

Phase Transitions and Structure in Combinatorial Problems (MP1)

Tad Hogg, Carla P. Gomes, Toby Walsh, and Weixiong Zhang
Monday, July 29, 2:00 - 6:00 PM

This tutorial will present an exciting area combining concepts from theoretical physics and AI. The presenters will show how the study of phase transition, structure, and related phenomena is changing the way we characterize the computational complexity of combinatorial problems, beyond the notion of worst-case complexity. They will also discuss how tools from statistical physics can be used to provide a much more detailed description of a problem's complexity and how such insights can be leveraged into the design of search algorithms.

Hogg, Gomes, Walsh, and Zhang will describe phase transition behavior observed in a number of different decision problems such as SAT, graph coloring, and number partitioning, as well as optimization problems such as TSP and maximum SAT, and in other complexity classes like P and PSpace. The tutorial will also cover recent work connecting structural features of problems with phase transition phenomena and computational complexity. Topics covered will include constrainedness, backbone structure, and small world topology. The presenters will also discuss how to exploit structure and randomness in problems using restart strategies and, more generally, portfolios of algorithms.

The tutorial is aimed at the general AI audience. Familiarity with some basic concepts of combinatorial optimization, probability theory, and computational complexity is desirable but not essential.

Tad Hogg is on the research staff of Xerox PARC. His research interests include multiagent systems, smart matter, and the relation between physics and computation, including analogies with physical phase transitions found in combinatorial search.

Carla P. Gomes is the Director of the Intelligent Information Systems Institute at Cornell University. Her research has covered several areas in artificial intelligence and computer science, including planning and scheduling, integration of CSP and OR techniques for solving combinatorial problems, and algorithm portfolios.

Toby Walsh is an EPSRC Advanced Research Fellow at the Department of Computer Science (York). He has worked extensively on phase transition behavior in a number of different areas, including satisfiability, constraint satisfaction, traveling salesperson problems, and number partitioning.

Weixiong Zhang is an associate professor at Washington University in St. Louis. His primary research interests include multiagent systems, heuristic search and combinatorial optimization, especially phase transitions and approximation methods that exploit phase transitions.

Practical Approaches to Handling Uncertainty in Planning and Scheduling (SP1)

J. Christopher Beck and Thierry Vidal
Sunday, July 28, 2:00 - 6:00 PM

Classical planning and scheduling assumes a deterministic environment where, for example, actions always succeed and have a known duration. Often, in realistic applications, these strong assumptions are not reasonable: some events may occur that make precomputed schedules and plans infeasible.

Different possibilities exist to deal with such problems, but some questions are still hard to answer: considering the kind of uncertainties that one has to face, the desired level of robustness, and even what one means by "robustness", what is the best technique to use? The tutorial aims at giving the attendees the basic understanding for attacking such practical issues.

The theme in this tutorial is the balance between off-line and on-line decision-making. Approaches range from purely reactive techniques that reason on-line to modify the initial "optimistic" schedule, to proactive, off-line techniques that consider possible failure cases before execution, providing the executing agent with ways to prevent them. Special attention will be given to mixed approaches that provide off-line flex-

ible plans or schedules allowing adaptation by simple on-line decision-making. Participants should have a basic knowledge of AI and KR techniques. Some knowledge of approaches to classical planning and scheduling and techniques for reasoning about uncertainty is desirable, but not mandatory.

J. Christopher Beck is a senior scientist in the Scheduler team at ILOG. He received an M.Sc. and Ph.D. in computer science from the University of Toronto. His research interests focus on problem structure, hybrid algorithms, search, and aspects of real-world problem solving such as uncertainty and robustness.

Thierry Vidal is assistant professor at the ENIT engineering college in Tarbes, France. He received a Ph.D. in artificial intelligence at the University of Toulouse in 1995, and spent one year at the University of Linköping, Sweden. His research interests include uncertainty and constraint reasoning in temporal planning and scheduling, multi-agent scheduling, reactivity and robustness issues.

Practical Machine Learning for Software Engineering (SP3)

Tim Menzies and Gary D. Boetticher
Sunday, July 28, 2:00 - 6:00 pm

Machine learning (ML) is not hard and should be a standard part of any software engineer's toolkit. Software engineers can use machine learners to simplify systems development. Successful deployment of ML tools requires datasets and many software engineering companies operate in such data-starved domains, particularly the newer, smaller software companies. In such data-starved domains, learning must be proceeded by a modeling process to generate a model to use to generate data sets.

This tutorial explains how to apply simple and inexpensive ML tools and techniques to assist in the construction of systems that support classification, prediction, diagnosis, planning, monitoring, requirements engineering, validation, and maintenance in the context of data-starved domains. Case study material will be presented using examples from software fault estimation, software effort estimation, software risk reduction, and other software engineering domains. Knowledge farming is a method for growing data sets from partial descriptions of domain knowledge, then summarizing them with machine learning.

This tutorial is practitioner-oriented suitable for the AI-novice or the technical manager of software engineering projects. Minimal background knowledge is required since the tutorial makes few assumptions regarding prior AI or machine learning knowledge. Most of the tutorial would also be suitable as a manager-level introduction to machine learning and its applications in software engineering. The tutorial is also suitable for machine learning theoreticians interested in assessing the practicality of their techniques for a general audience. From the tutorial, participants will gain an appreciation of the realities and possibilities of machine learning methods for real-world software engineering problems.

Tim Menzies holds a Ph.D. in artificial intelligence (1995), masters of cognitive science (1988), and a computer science undergraduate degree, all from the University of New South Wales, Sydney, Australia. Menzies has a long background in practical applications of artificial intelligence. He was the author of Australia's first exported expert system (1987). Since then he has worked as a software engineering consultant and a university professor. Since 1998, Menzies has been consulting with NASA on applying machine learning techniques to software engineering problems. His publication count includes over 120 articles. In his current research Menzies uses machine learning to find the average case behavior of inferences within the space of uncertainties representing the space of options within procedural and declarative software.

Gary D. Boetticher holds a Ph.D. in computer science from West Virginia University. His dissertation topic, "A Neural Network-Based Bottom-Up Approach for Building a Software Reuse Economic Model" blends machine learning (neural networks) with software engineering (metrics and reuse). Professionally, Boetticher has 18 years corporate/industrial-based experience. Clientele include: The U.S. Olympic Committee, NASA, LDDS WorldCOM, Bailey Network Management, Dime Savings Bank of New York, Mellon Mortgage, Linden Capital, and ViaCom. Boetticher served on the executive committee for an IEEE Software Engineering Standards Committee (Reuse Interoperability Group) to establish industry reuse standards. Boetticher has 12 years academic experience and is currently a faculty member at the University of Houston, Clear Lake.

Rational Action in Autonomous Agents (MP2)

Michael Wooldridge and Simon Parsons
Monday, July 29, 2:00 - 6:00 PM

The past decade has been witness to a rapid growth of interest in the problems surrounding the design of rational autonomous agents. For many researchers, this is now the defining problem of the AI endeavor. Such agents have one core problem that they have to solve — to decide what the best action is to take at a given moment in time. Our aim in this tutorial is to show how to build agents that solve this problem. That is, we describe how to design computational agents that can make effective decisions given only limited resources.

The tutorial is intended for an audience with a basic grounding in AI, (including such basic issues as search and knowledge representation) but no knowledge of agents, decision theory, rational action, bounded rationality, or the BDI model.

Michael Wooldridge is a professor in the Department of Computer Science at Liverpool University, and is head of the agent technology research group. He received his Ph.D. from the University of Manchester in 1992 for work on the semantics of multi-agent systems, and since that time has continued a program of research into the theory and practice of agent-based systems, and particularly into software engineering and principled development techniques for such systems. He has published over 100 articles on multi-agent systems, and has edited five books and written two monographs on the subject.

Simon Parsons is a visiting professor in the Department of Computer Science at Liverpool University and a Visiting Scholar in the Center for Coordination Science at the Massachusetts Institute of Technology. He received his Ph.D. from the University of London in 1993 for work on probabilistic and non-classical approaches to decision making, and since that time has worked both on decision-making and the theory of agent-based systems, especially communication between agents. He has published over 100 articles and has edited three books and written a monograph on these subjects.

The State of the Art in Language Modeling (SA1)

Joshua Goodman and Eugene Charniak
Sunday, July 28, 9:00 AM - 1:00 PM

This tutorial will cover the state-of-the-art in language modeling. Language models give the probability of word sequences, i.e. "recognize speech" is much more probable than "wreck a nice beach." The tutorial will be accessible to anyone, although basic knowledge of probability will help. Language models are useful in many areas, including speech recognition, handwriting recognition, machine translation, information retrieval, and spelling correction, to name a few, and techniques from language modeling can be applied to modeling any discrete sequence. The problem is surprisingly hard: it is AI-complete.

Goodman and Charniak will start by describing classic language modeling techniques, including the trigram model, techniques for smoothing probability estimates, caching (using recent information), skipping, sentence-mixture models, and word clustering (how to get them, how to use them). Then, they will switch to a different approach, grammar-based models, which exploits the structure of language and recent progress in statistical parsing, yielding large improvements. Finally, the presenters will quickly describe other recent promising work, and available tools and resources.

Attendees will gain a broad understanding of current language modeling techniques, and the background needed to either build their own language models, or to apply these techniques to other fields.

Joshua Goodman has worked on speech recognition at Dragon Systems and later at Microsoft Research. Recently, he moved to the Microsoft Research Machine Learning and Applied Statistics group, where he has worked on probabilistic models for natural language tasks, such as grammar checking.

Eugene Charniak is Professor of Computer Science and Cognitive Science at Brown University. He has published four books, including most recently "Statistical Language Learning". He is a Fellow of the AAAI. His recent research has been in the area of statistical techniques for language understanding.

Registration

Fees

The AAAI-02/IAAI-02 program registration includes admission to the technical plenary and poster sessions, the Exhibition Program, the Intelligent Systems Demonstrations, the Robot Competition and Exhibition, the Student Abstract and Poster Session, the Tutorial Forum, the Workshop Program (by invitation only), the opening reception, the AI Festival, and the AAAI-02/IAAI-02 Conference Proceedings. Onsite registration will be located on the Meeting Level of the Shaw Conference Centre, 9797 Jasper Avenue NW, Edmonton, Alberta, Canada T5J 1N9. Telephone: 403-421-9797.

Early Registration (Postmarked by May 31)

AAAI Members	Regular $475	Students $125
Nonmembers	Regular $625	Students $235

Late Registration (Postmarked by June 28)

AAAI Members	Regular $590	Students $175
Nonmembers	Regular $690	Students $265

Onsite Registration (Postmarked after July 1 or onsite)

AAAI Members	Regular $695	Students $225
Nonmembers	Regular $795	Students $295

Robot Building Lab (RBL-02)

The Robot Building Lab registration includes admission to the Robot Building Lab and the Exhibition Program. Fees are $150 for members or nonmembers and $75.00 for students. Attendance is limited and early registration is strongly encouraged. Preregistration is required.

Payment Information

Prepayment of preregistration fees is required. Checks, international money orders, bank transfers, and traveler's checks must be in US dollars (Canadian currency will also be accepted onsite). American Express, MasterCard, VISA, and government purchase orders are also accepted. Registration applications postmarked or transmitted electronically after the early registration deadline will be subject to the late registration fees. Student registrations must be accompanied by proof of full-time student status.

Refund Requests

The deadline for refund requests is July 8, 2002. All refund requests must be made in writing. A $75.00 processing fee will be assessed for all refunds.

Registration Hours

Registration hours will be Sunday and Monday, July 28 - 29, 7:30 AM - 6:00 PM; Tuesday and Wednesday, July 30 - 31, 8:00 AM – 5:30 PM; and Thursday, August 1, 8:00 AM - 2:00 PM. All attendees must pick up their registration packets for admittance to programs.

Workshop Program

Preliminary Schedule

Participation in the workshop program is by invitation only. Registration is included in the AAAI-02 technical registration fee. All workshop participants must register for the AAAI-02 technical program.

Agent-Based B2B Electronic Commerce Technologies (W1)
Brian Blake (blakeb@cs.georgetown.edu, bblake@mitre.org)
Sunday, July 28

Agent-Based Systems for Information Retrieval (W2)
R. Scott Cost (cost@csee.umbc.edu), Charles Nicholas (nicholas@csee.umbc.edu) and Ian Soboroff (isoboroff@rogue.ncsl.nist.gov)
Monday, July 29

Artificial Intelligence for Intelligent Business (W3)
Daniel E. O'Leary (oleary@usc.edu), Benjamin Grosof (bgrosof@mit.edu) and Alun Preece (apreece@csd.abdn.ac.uk)
Monday, July 29

Automation as Caregiver: The Role of Intelligent Technology in Elder Care (W4)
Karen Haigh (khaigh@htc.honeywell.com)
Monday, July 29

Autonomy, Delegation, and Control: From Inter-Agent to Groups (W5)
Henry Hexmoor (hexmoor@mail.uark.edu) and Rino Falcone (falcone@www.ip.rm.cnr.it)
Sunday, July 28

Coalition Formation in Dynamic Multiagent Environments (W6)
Leen-Kiat Soh (lksoh@cse.unl.edu) and Charlie Ortiz (ortiz@ai.sri.com)
Monday, July 29

Cognitive Robotics (CogRob2002) (W7)
Chitta Baral (chitta@asu.edu) and Sheila McIlraith (sam@ksl.stanford.edu)
Sunday, July 28

Game Theoretic and Decision Theoretic Agents (W8)
Piotr Gmytrasiewicz (piotr@cs.uic.edu) and Simon Parsons (s.d.parsons@csc.liv.ac.uk)
Sunday, July 28

Intelligent Integration of Information and Services on the Web (W9)
Dean Allemang (dallemang@acm.org), Eleni Stroulia (stroulia@cs.ualberta.ca) and John Mylopoulos (jm@cs.toronto.edu)
Sunday, July 28

Intelligent Situation-Aware Media and Presentations (ISAMP) (W10)
Rainer Malaka (malaka@eml.org) and Antonio Krueger (krueger@cs.uni-sb.de)
Monday, July 29

Meaning Negotiation (W11)
Paolo Bouquet (bouquet@cs.unitn.it)
Sunday, July 28

Mobile Robot Competition and Exhibition Workshop (W12)
Bill Smart (wds@cs.wustl.edu)
Thursday, August 1

Multi-Agent Modeling and Simulation of Economic Systems (W13)
Koichi Kurumatani (kurumatani@w-econ.org), Shu-Heng Chen (chchen@nccu.edu.tw), and Azuma Ohuchi (ohuchi@complex.eng.hokudai.ac.jp)
Monday, July 29

Ontologies for the Semantic Web (W14)
Adam Pease (apease@ks.teknowledge.com), Richard Fikes (fikes@ksl.stanford.edu) and Jim Hendler (hendler@cs.umd.edu)
Monday, July 29

Planning with and for Multiagent Systems (W15)
Michael Brenner (brenner@informatik.uni-freiburg.de) and Marie desJardins (mariedj@csee.umbc.edu)
Monday, July 29 (may extend to Sunday, July 28)

Preferences in AI and CP: Symbolic Approaches (W16)
Ulrich Junker (junker@ilog.fr)
Sunday and Monday, July 28–29

Probabilistic Approaches in Search (W17)
Toby Walsh (tw@cs.york.ac.uk) and Carla Gomes (gomes@CS.Cornell.edu)
Sunday, July 28

Real-Time Decision Support and Diagnosis Systems (Joint Workshop with KDD-02 and UAI hosted by AAAI-02) (W18)
Haipeng Guo (hpguo@cis.ksu.edu), Eric Horvitz (horvitz@microsoft.com), William H. Hsu (bhsu@cis.ksu.edu), and Eugene Santos Jr. (eugene@engr.uconn.edu)
Monday, July 29

Semantic Web Meets Language Resources (W19)
Nancy Ide (ide@cs.vassar.edu) and Chris Welty (welty@cs.vassar.edu)
Sunday, July 28

Spatial and Temporal Reasoning (W20)
Hans W. Guesgen (hans@cs.auckland.ac.nz), Frank D. Anger (fanger@nsf.gov) and Gerard Ligozat (ligozat@limsi.fr)
Monday, July 29

Hotel & Housing Information

Hotels

AAAI has reserved a block of rooms in Edmonton hotels at reduced conference rates. Conference attendees must contact the hotel directly and identify themselves as AAAI-02 registrants to qualify for the reduced rates. Please note the cut-off date for reservations and the reservation method and information under each hotel. Hotel rooms are priced as singles (1 person, 1 bed), doubles (2 persons, 2 beds), triples (3 persons, 2 beds), or quads (4 persons, 2 beds). Rooms will be assigned on a first-come, first-served basis. All rooms are subject to any federal, provincial, and city taxes in effect at the time of the conference. These taxes are currently twelve percent (5% provincial room tax and 7% goods and service tax).

Please note: All room rates are quoted in Canadian Dollars.

The Westin Edmonton

(Headquarters Hotel)
10135 – 100th Street
Edmonton, Alberta, Canada T5J 0N7
Reservations: 780-426-3636 or 800-937-8461
Fax: 780-428-1454
Single/Double Main Building: $135.00 CDN
Single/Double Main Building King: $145.00 CDN
Single/Double Deluxe Wing: $155.00 CDN
Triple Main Building: $155.00 CDN
Triple Deluxe Wing: $175.00 CDN
Quad Main Building: $175.00 CDN
Quad Deluxe Wing: $195.00 CDN
Check-in time: 3:00 PM
Check-out time: 1:00 PM
Distance to center: 1 block
Cut-off date for reservations: June 27, 2002

Reservations will not be considered guaranteed until the hotel has received from the individual guest a room deposit or a major credit card guarantee in the amount equivalent to the cost of the first night's accommodation. At the time of check-in on the day of arrival, all guests will be asked to verify their departure date. At that time, any necessary changes can be made without penalty. If the guest chooses to depart prior to this date, they will be assessed a fee of $25.00 against their credit card.

Crowne Plaza Chateau Lacombe

10111 Bellamy Hill
Edmonton, Alberta, Canada T5J 1N7
Reservations: 780-428-6611 or 1-800-276963
Fax: 780-425-6564
Single/Double: $124.00 CDN
Club Floor Room: $154.00 CDN
Studio Suite: $154.00 CDN
Executive Suite: $184.00 CDN
Check-in time: 1:00 PM
Check-out time: 1:00 PM
Distance to center: 3 blocks
Cut-off date for reservations: June 27, 2002

Reservations will not be considered guaranteed until the hotel has received from the individual guest a room deposit or a major credit card guarantee in the amount equivalent to the cost of the first night's accommodation.

The Fairmont Hotel Macdonald

10065-100 Street
Edmonton, Alberta, Canada T5J 0N6
Reservations: 780-424-5181 or 800-441-1414
Single/Double Fairmont: $179.00 CDN
Single/Double Fairmont Deluxe: $199.00 CDN
Single/Double Edmonton Premiere: $209.00 CDN
Single/Double Edmonton Premiere View: $219.00
Check-in time: 3:00 PM
Check-out time: 12:00 PM
Distance to center: 1 block
Cut-off date for reservations: June 27, 2002

Individuals will be required to guarantee their reservations for late arrival in cash or by use of a major credit card. Cancellation of individual reservations made up to 48 hours prior to arrival will be accepted, and the deposit refunded for those rooms for the full night's stay.

Student Housing — University of Alberta

AAAI-02 has reserved a block of residence rooms at the University of Alberta. Accommodations are single and twin rooms. Washrooms are centrally located on each floor; linen and towel services are provided. Please note twin rooms are either dedicated twin rooms or single rooms are used with the provision of cots — availability of dedicated twin rooms cannot be guaranteed. Groups not wanting to utilize cots to twin rooms will be required to pay single rates. Single rooms receive one hot breakfast ticket for each day of their stay and twin rooms receive two hot breakfast tickets for each day of their stay.

The Shaw Conference Centre is located in the downtown core and is accessible from the Univeristy of Alberta by the LRT (Light Rail Transit – subway system). The University of Alberta LRT Station is about a 10 minute walk from Lister Hall. The cost is $2.00 CDN one way. It is about a 10 minute ride to the Shaw Conference Centre. Attendees should take the LRT from the University of Alberta to the Churchill Station (the 5th stop after they leave the University of Alberta). From the Churchill Station they go up to ground level and walk to the Shaw Conference Centre. It is about a block south of the Station entrance.

Twin room rates per room per night are $62.20 CDN, including tax, and single room rates per room per night are $43.37 CDN, including tax. Reservations should be made by July 5, 2002. After this date, rooms will be available on a first come, first served basis. A reservation form is included in this brochure. Housing registration will not be confirmed without payment. Reservations will be confirmed if the form has complete credit card information or is accompanied with a check or money order in Canadian funds equal to the first night's stay. A full refund will be given if notice of cancellation is received two days prior to arrival.

Reservation form and payment should be sent to:

The University of Alberta
Guest Services
44 Lister Hall
Edmonton, Alberta
Canada T6G 2H6

Reservations for residence rooms can also be made by calling 780-492-4281 or 800-615-4807 (Canada Only), by e-mail at guest.services@ualberta.ca, or by faxing the reservation form (on page 19) to the office at 780-492-7032.

Transportation & General Information

Air Transportation and Car Rental

Stellar Access, Inc. is the AAAI-02 official travel service. Now you can book your contracted discounts directly from the AAAI web site! Use the efficient and unique Event Traveler (online booking engine) powered by SAI! To book your trip, go to www.aaai.org/Conferences/National/2002/sai.html

Travel between July 25 and August 4, 2002 to receive the following discounts:

Air Canada: (800-268-0024) Save 5% off lowest fares anytime and 10% off lowest fares 60 days prior to departure. An additional 5% may apply on certain unrestricted fares with a 60-day advance purchase. All rules and restrictions apply. If you call direct, use code CV# 540577.

Avis Rent A Car: Rates start as low as $44/day and $248/week with unlimited free mileage. If you call direct, use code AWD# J098872.

Be sure to reference AAAI Event #1889 when making reservations through Stellar Access. If you have questions, contact Stellar Access, Inc., 800-929-4242 (outside US & Canada: 858-805-6109). Fax: 858-547-1711. www.stellaraccess.com. *Reservation hours:* M-F 6:30 AM – 5:00 PM Pacific Time.

The following fees will apply to all reservations made through Stellar Access. *Online:* $15.00 per reservation. *Telephone (US and Canada):* $30.00 per reservation. *Telephone (Outside US and Canada):* $35.00 per reservation.

Ground Transportation

The following information is the best available at press time. Please confirm fares when making reservations.

Airport Shuttle

Sky Shuttle is the official carrier to and from Edmonton International Airport. They offer frequent service to and from the conference hotels. The one-way fare is $13.00 CDN; round trip is $20.00 CDN. For more information, consult www.edmontonairports.com/gtr/skyshutt.htm, or call 888-438-2342.

Taxi

Taxis are available at Edmonton International Airport. The approximate fare from the airport to downtown Edmonton is $41.00 CDN.

Exchange Rate

The American Dollar, with one dollar equaling 100 cents. Approximate rate of exchange at print time is: US $1.00 = $1.59 CDN (Canadian Dollars)

Bus

Greyhound Bus - For information on fares and scheduling, call 1-800-661-8747. The downtown Edmonton Greyhound terminal is located at 10324 – 103 Street.

City Transit System

The Edmonton Transit System includes Buses, LRT (light rail transit) and DATS (disabled adult transit service). They can be contacted at 780-496-1611 or www.gov.edmonton.ab.ca/transit. The fare is $2.00 CDN. The station closest to the Shaw Conference Center is Central and is located at 100th Street and Jasper Avenue.

Train

The Via Rail station is located within a 15-minute drive of downtown Edmonton. The toll free number from the USA is 800-561-3949 or in Canada, 800-561-8630. (www.viarail.ca.)

Parking

The City of Edmonton provides over 1,600 convenient parking stalls within a five-minute walk from the Shaw Conference Centre. The Library, Canada Place, and City Hall Parkades provide pedway connections to the Centre. Parking is also available at the City Market and on-street meters in the vicinity.

Canada Place Parkade: 9700 Jasper Avenue. Entrance at 97 Street North of Jasper Avenue

Library Parkade: 10165 – 100 Street. Entrance on 99 Street (Citadel) & 100 Street

City Hall Parkade: 1 Sir Winston Churchill Square. Entrance on 99 Street

City Market Surface Lot: 10165 – 97 Street. Entrance on 101 and 102 Avenue

Rates

GST included, $1.25 CDN per half hour or part thereof.

Monday-Friday

6:00 am-6:00 PM	$10.00 maximum
6:00 pm-1:00 AM	$2.00 maximum
Daily Maximum	$15.00

Saturday and Sunday

Midnight to 6:00 PM

First 3 hours	$1.00 maximum
Parking thereafter	$1.25/half hour
6:00 PM-1:00 AM	$2.00 maximum
Daily Maximum	$10.00

Disclaimer

In offering Avis Rent A Car, Air Canada, Crowne Plaza Chateau Lacombe, The Fairmont Hotel Macdonald, Shaw Conference Centre, University of Alberta, Westin Edmonton, and all other service providers (hereinafter referred to as "Supplier(s)" for the National Conference on Artificial Intelligence and the Innovative Applications Conference), AAAI acts only in the capacity of agent for the Suppliers which are the providers of the service. Because AAAI has no control over the personnel, equipment or operations or providers of accommodations or other services included as part of the AAAI-02/IAAI-02 program, AAAI assumes no responsibility for and will not be liable for any personal delay, inconveniences or other damage suffered by conference participants which may arise by reason of (1) any wrongful or negligent acts or omissions on the part of any Supplier or its employees, (2) any defect in or failure of any vehicle, equipment or instrumentality owned, operated or otherwise used by any Supplier, or (3) any wrongful or negligent acts or omissions on the part of any other party not under the control, direct or otherwise, of AAAI.

Edmonton Visitor Information

Edmonton: The Festival City

Edmonton is the capital of the province of Alberta, the second largest metro area west of Toronto and the fifth largest city in Canada. The city originated from a humble fur trading post built by the Hudson's Bay Company in 1795. Edmonton's first period of growth was fuelled by the legendary Klondike Gold Rush of 1897. At that time, the tiny frontier community of Fort Edmonton was the last supply center for legions of adventurers following Canada's arduous overland route to the Klondike gold fields. The future greatness of Edmonton was assured when the province named the bustling city Alberta's capital in 1906. A third major period of growth came with the discovery of vast reserves of "black gold" in the region in 1947.

Edmonton features many attractions of interest, including galleries, museums, zoos, and historical sites. The North Saskatchewan River Valley includes the longest stretch of urban parkland in Canada.

Known as "Canada's Festival City," Edmonton hosts over 19 major festivals each year, including the Klondike Festival, overlapping the beginning of AAAI-02. Edmonton is also the gateway to the Canadian Rockies and beautiful Jasper National Park, accessed either by the TransCanada Yellowhead Highway or Canadian rail.

The Shaw Conference Centre offers a spectacular view of Edmonton's river valley from the banks of the North Saskatchewan river. This award facility is situated in the heart of the City's vibrant downtown core. Visitors gain easy access to Edmonton's major hotels, fine restaurants, theatre, and downtown shopping district through direct pedway connections.

Edmonton Visitor Information

Edmonton Tourism welcomes you to Edmonton! They are located in the Shaw Conference Centre and are open Monday through Friday, 8:00 AM – 4:30 PM.

Edmonton Tourism
9797 Jasper Avenue
Edmonton, Alberta, Canada T5J 1N9
Tel: (780) 426-4715 or 1-800-463-4667
Email: edeinfo@ede.org
www.tourism.ede.org

Edmonton Attractions

Experience one of Canada's most popular urban destinations. Edmonton combines the sophistication of a modern, big city with the small-town friendliness of traditional western hospitality. One of the cleanest, most affordable and livable cities in the world, Edmonton has a surprising number of man-made attractions and natural areas for you to explore! Located between Jasper National Park in the Canadian Rockies and Elk Island National Park, Edmonton is the gateway to a land of majestic mountains, pristine lakes, historic rivers and northern adventures.

Dining and Entertainment

Enjoy some of the finest cuisine in Canada, including world-famous Alberta beef! Discover award-winning restaurants and sample some of the more than 30 types of international cuisine in Edmonton's 2,000 restaurants. There's something delicious for every taste and price range.

Canada's Festival City is noted for a calendar full of annual events and festivals celebrating jazz, folk and symphonic music, theatre, dance, visual arts, street performers, food and fun for every member of the family. If spectator sports are more to your liking, there's the Canadian Finals Rodeo, NHL hockey, NPSL soccer, CFL football, PCL Triple A baseball and horse racing to enjoy. Edmonton also boasts a number of casinos, nightclubs and dinner theatres to keep you entertained.

Sightseeing

Plan on spending several days to visit attractions like Fort Edmonton Park (site of the AAAI-02 Opening Reception), the Provincial Museum of Alberta with the Syncrude Gallery of Aboriginal Culture, the Edmonton Space & Science Centre, the Muttart Conservatory's botanical gardens, and the majestic Alberta Legislature Building. You'll need more than a day to experience all of the unique attractions at the West Edmonton Mall!

Outdoor Adventures

For outdoor enthusiasts, try one of the 70 golf courses, canoeing, gold panning, cycling, nature walks, wildlife viewing, or near the city, Edmonton boasts the longest stretch of urban parkland in North America. The North Saskatchewan River valley parkland is 22 times larger than New York's Central Park and eight times the size of Vancouver's Stanley Park!

Conference at a Glance

MORNING	AFTERNOON	EVENING
Sunday, July 28		
Registration Tutorial Forum Workshops AAAI/SIGART Doctoral Consortium Robot Building Laboratory	Registration Tutorial Forum Workshops AAAI/SIGART Doctoral Consortium Robot Building Laboratory	
Monday, July 29		
Registration Tutorial Forum Workshops AAAI/SIGART Doctoral Consortium Robot Building Laboratory	Registration Tutorial Forum Workshops AAAI/SIGART Doctoral Consortium Robot Building Laboratory	Opening Reception
Tuesday, July 30		
Registration Keynote Address AAAI–02 Technical Program IAAI-02 Technical Program Exhibition / IS Demos / Botball Robot Competition and Exhibition	Registration AAAI-02 Technical Program IAAI-02 Technical Program Exhibition / IS Demos / Botball Robot Competition and Exhibition	Technical Poster Session AAAI Fellows Dinner
Wednesday, July 31		
Registration Presidential Address AAAI–02 Technical Program IAAI-02 Technical Program Exhibition / IS Demos / Botball Robot Competition and Exhibition	Registration AAAI-02 Technical Program IAAI-02 Technical Program Exhibition / IS Demos / Botball Robot Competition and Exhibition AI Festival	Technical Poster Session
Thursday, August 1		
Registration AAAI–02 Technical Program IAAI–02 Technical Program Robot Workshop	AAAI-02 Technical Program IAAI-02 Technical Program Robot Workshop	

AAAI (American Association for Artificial Intelligence)

July 26 to August 3, 2002

LISTER RESIDENCE - University of Alberta

(Please print clearly)

Name: (First) (Last)		**M F (Circle)**
Address:	Telephone:	
City/Town:	Postal Code:	
Province/State:	Country:	
Email address:		
Roommate's Name (If reserving twin): (First) (Last)		

CHECK-IN TIME IS AFTER 3:00 pm - CHECK-OUT TIME IS BY 12 NOON

Check-in Date:	Check-out Date:

PLEASE NOTE: Reservations will be confirmed if this form has complete credit card information or is accompanied with a cheque or money order in Canadian Funds-equal to the first night's stay. A full refund will be given if notice of cancellation is received 2 days prior to arrival. By signing below, you agree with this policy and authorize the University of Alberta to charge your credit card for the first night should you fail to provide sufficient notice. Cheques and/or money orders will be processed upon receipt, with the balance due upon check-in. Credit Card numbers will be used to guarantee the reservation and will not be processed until check-in. Please make cheques or money orders payable to the University of Alberta.

Payment Type (please circle): Credit Card Cheque/ Money Order

If paying by Credit Card, please complete the following:

VISA NUMBER: _____ EXPIRY DATE: _____

MASTERCARD NUMBER: _____ EXPIRY DATE: _____

Single: _____ nights x $43.37 (includes taxes) Rate listed includes **one hot breakfast ticket** each morning	$
Twin: _____ nights x $62.20 (includes taxes) Rate listed includes **two hot breakfast tickets** each morning	$
TOTAL ENCLOSED (Canadian Funds)	**$**

_____ _____

Signature Date

PLEASE RETURN COMPLETED FORM, ALONG WITH YOUR REMITTANCE, TO:

The University of Alberta
Guest Services
44 Lister Hall
Edmonton, Alberta
CANADA T6G 2H6

OR FAX YOUR COMPLETED RESERVATION FORM TO 780-492-7032

University of Alberta Conference Centre

ACCOMMODATION INFORMATION

The Conference Centre is conveniently located 15 minutes from the Municipal Airport, 30 minutes from the International Airport and is easily accessible by private and public transportation.

Single and twin accommodation is available in traditional residence rooms. Reservations for residence rooms can be made by calling 780-492-4281 or 800-615-4807 (Canada Only), by e-mail at ***guest.services@ualberta.ca*** , or by faxing our office at 780-492-7032.

Clean towels are provided every second day and fresh linen every Thursday. Additional linen and towels can be obtained from the Guest Services Desk (open 24 hours). Washrooms are centrally located on each floor as well as a common lounge area and laundry facilities. Public telephones are located on the main floor of each residence hall and in Lister Hall. Passes for University recreational and athletic facilities are available for purchase from the Department of Athletics.

All residences and common lounges are non-smoking. Smoking is permitted in designated areas of Lister Hall only.

If parking is required a permit must be purchased from the parking attendant or ticket dispenser located at the front entrance of the parking lot adjacent to Lister Hall. Please inform the Guest Services staff upon check in if you have a vehicle with you.

Calling cards are strongly recommended if long distance service is required and can be purchased across from the Guest Services Desk. Credit card telephones are located in Lister Hall.

MEAL and DINING INFORMATION

The "Lister Market" offers full cafeteria service for meals, as well as a variety of convenience items, fresh bakery products, beverages, grill service, souvenirs and personal care items (open 7:00 am to 6:30 pm daily). Guest Services can provide additional information on area restaurants and services.

FOR OFFICE USE ONLY:

Date Received: _____

Confirmation Mailed: _____ **By:** _____

Room Assigned: _____ **By:** _____

Amount: _____ **Receipt No.** _____

Full payment is required to confirm your reservation. On stays of two weeks or less, please provide 48 hours notice of cancellation or you will forfeit the cost of one night's accommodation. On stays of more than two weeks, 14 days notice of cancellation is required or you will forfeit a $50.00 deposit.

AAAI-02 / IAAI-02 Preregistration Form

Name _____ Company/Univ. _____

Home Work

Address _____ Dept./MS _____

City _____ State _____ Zip _____

Country _____ Daytime Telephone & Fax _____

Membership No. _____ E-mail Address _____

Circle fees that apply. Students must submit registration receipt or letter from faculty advisor	AAAI Member	AAAI Student Member	Nonmember	Nonmember Student	TOTAL
Early Registration *(Postmarked by May 31)*	$475	$125	$625	$235	_____
Late Registration *(Postmarked by June 28)*	$590	$175	$690	$265	_____
Onsite Registration *(Postmarked after June 28 or onsite)*	$695	$225	$795	$295	_____
Tutorial Forum *Included in Technical Registration Fee above. Circle all courses you plan to attend. Limit 4 consecutive tutorials.*	7/28 AM 7/28 PM 7/29 AM 7/29 PM	SA1 SA2* SA3 SA4 SP1 SP2 SP3 MA1 MA2* MA3 MP1 MP2 *full-day tutorial			
Robot Building Lab (RBL)	Regular $150.00	Students $75.00			_____
Opening Reception *Included in technical registration*	Spouse or guest @ $25.00 per person; child @ $10.00 Total number of extra persons: _____				_____
AI Festival *Included in technical registration*	Spouse or guest @ $15.00 per person; child @ $5.00 Total number of extra persons: _____				_____
Workshops *(Included in technical registration.) (By invitation only.)*	Workshop Number: _____ **Do not register for workshops unless you have been invited to participate by the workshop organizer.**				
AAAI Membership *(totals continued from reverse)*					_____

Method of Payment

Check One: MasterCard Visa American Express Check payable to AAAI–02 and drawn on a US Bank

Credit Card Number: _____

Expiration Date: _____

Name on Card _____

Total Enclosed $ _____

Signature Authorization _____

All refund requests must be made in writing by July 8, 2002. A $75.00 processing fee will be assessed for all refunds granted. Registrations postmarked or transmitted electronically after June 28 are subject to onsite rates.

Onsite registration will be on the Meeting Level of the Shaw Conference Centre,
9797 Jasper Avenue, NW, Edmonton, Alberta, Canada T5J 1N9. Telephone: 403-421-9797.
Send with payment to AAAI-02/IAAI-02, 445 Burgess Drive, Menlo Park, CA 94025-3442, 650-328-3123, Fax 650-321-4457

Now it's even easier to become a member of the AAAI. Just fill out and mail both sides of this form, and we'll ensure that you receive all the benefits that thousands of regular members worldwide enjoy each year.

Here are just a few of the benefits you'll receive:

- *AI Magazine*
- AAAI Electronic Library Access
- Reduced rates on selected AI-related journals and publications
- *AI Journal* online access
- Reduced rates on AAAI-sponsored conferences

Information about all of AAAI's events and programs, including:

- Spring and Fall Symposium Series
- AAAI Press Publications
- Conference on Innovative Applications
- Tutorial Program
- Exhibit Program
- AAAI Student Programs
- Technical Program of the National Conference on Artificial Intelligence
- AAAI–Sponsored Workshops

Take the initiative to join the association that will keep you informed about the latest developments in your exciting field.

Renew your membership or become a member of the AAAI today.

Application Type

New Application

Change of Address

Renewal

(Please include your membership number on the reverse side of this form)

Do not include me in the online *Membership Directory*

Do not release my name to outside groups

I am interested in the following AAAI affiliates:

AIPS GECCO

KDD SARA UAI

Membership Categories

Please circle desired term and amount

Individual US / Canadian Member

One Year	*Three Year*	*Five Year*	*Life*
$50	$150	$250	$700

Individual Foreign Member

One Year	*Three Year*	*Five Year*	*Life*
$75	$225	$375	$1000

Institution / Library—US / Canadian

One Year	*Three Year*	*Five Year*	*Life*
$75	$225	$375	n/a

Institution / Library—Foreign

One Year	*Three Year*	*Five Year*	*Life*
$100	$300	$500	n/a

Full-Time US/Canadian Student

One Year	*Three Year*	*Five Year*	*Life*
$20	n/a	n/a	n/a

Full-Time Foreign Student

One Year	*Three Year*	*Five Year*	*Life*
$45	n/a	n/a	n/a

Order cannot be processed if information is incomplete or illegible. Student applicants must send legible proof of student status, i.e., a letter from your faculty advisor verifying full-time enrollment in a degree-bearing program, or a copy of your current registration receipt. Prepayment is required for all orders. Memberships begin with the next published issue of AI Magazine.

Be sure to enter your complete name and address on the reverse side of this form!

Amount

_____

(Enter here and on reverse)

SHAW Conference Centre

A Division of Economic Development Edmonton

Need Directions? Call our switchboard at (780) 421-9797

Directions to Shaw Conference Centre from Edmonton International Airport

Take Airport Road (10 Ave.) East to #2 Highway (Calgary Trail North), continue North to Whitemud Drive turning right (east) on 99th St., continue north, proceed over Low Level Bridge, immediately turn right onto Grierson Hill Road.

RESTAURANTS

Baraka Cafe
10168 Jasper Avenue
(780) 423-1819

Bistro Praha Gourmet Cafe
10168 - 100A Street
(780) 424-4218

Cafe Select
10018 - 106 Street
(780) 423-0419

Chance Restaurant
10150 - 101 Street
(780) 424-0400

The Creperie
10220 - 103 Street
(780) 420-6656

Donna at the Citadel
Citadel Theatre
10177 - 99 Street
(780) 429-3338

Four Rooms Restaurant
137 Edmonton Centre
(780) 426-4767

Hardware Grill
9698 Jasper Avenue
(780) 423-0969

Harvest Room
Fairmont Hotel Macdonald
10065 - 100 Street
(780) 429-6424

Hy's Steak Loft
10013 - 101A Avenue
(780) 424-4444

LaRonde Revolving Restaurant
Crowne Plaza - Chateau Lacombe Edm.
10111 Bellamy Hill
(780) 428-6611

Pradera Cafe and Lounge
Westin Edmonton Hotel
10325 - 100 Street
(780) 493-8994

Russian Tea Room
10312 Jasper Avenue
(780) 426-0000

Sherlock Holmes Pub
10012 - 101A Avenue
(780) 426-7784

Sorrentino's Downtown
10162 - 100 Street
(780) 424-7500

Union Bank Inn
10053 Jasper Avenue
(780) 423-3600

HOTELS

1. **Grand Hotel**
2. **Sheraton Grande Hotel**
3. **Delta Edmonton Centre Suite Hotel**
4. **Coast Edmonton Plaza Hotel**
5. **The Westin**
6. **Days Inn**
7. **Alberta Place**
8. **Union Bank Inn**
9. **Fairmont Hotel Macdonald**
10. **Thornton Court Hotel**
11. **Inn on 7th**
12. **Howard Johnson Plaza**
13. **Crowne Plaza Chateau Lacombe Edmonton**
14. **Comfort Inn & Suites**
15. **Edmonton House Suite Hotel**

BANK MACHINES

- **Shaw Conference Centre**
  Assembly Level, 9797 Jasper Avenue
- **Canada Place**
  Food Court, 9700 Jasper Avenue
- **Bank of Montreal**
  10199 - 101 Street
- **Royal Bank**
  10107 Jasper Avenue
- **Canadian Imperial**
  Bank of Canada (CIBC),
  10102 Jasper Avenue

PARKING

- **Canada Place Parkade**
  9700 Jasper Avenue
- **City Market Surface Lot**
  10165 - 97 Street
- **Library Parkade**
  10165 - 100 Street or
  Entrance on 99 Street (Citadel) & 100 Street)
- **Grierson Hill Parking Lot**

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