



**Twenty-Third AAAI Conference  
on Artificial Intelligence  
(AAAI-07)  
Workshop Program**

July 13–14, 2008

Chicago, Illinois

*Sponsored by the  
Association for the  
Advancement of Artificial Intelligence*

445 Burgess Drive, Menlo Park, CA 94025-3442  
650-328-3123  
650-321-4457 (fax)  
workshops08@aaai.org  
www.aaai.org

## Deadlines

- April 7: Submissions due
- April 21: Notification of acceptance
- May 12: Camera-ready copy due to organizers and AAAI
- July 13–14: AAAI-07 Workshop Program

## AAAI Formatting Guidelines

- [www.aaai.org/Publications/Author/author.php](http://www.aaai.org/Publications/Author/author.php)

AAAI is pleased to present the AAAI-08 Workshop program. Workshops will be held Sunday and Monday, July 13–14, 2008 at the Hyatt Regency McCormick Place in Chicago. Exact locations and dates for the workshops will be determined in the spring.

The AAAI-08 workshop program includes 15 workshops covering a wide range of topics in artificial intelligence. Workshops are one day unless noted otherwise in the individual description. Each workshop is limited to approximately 25 to 65 participants. Participation at these workshops is by invitation from the workshop organizers.

There is a separate fee for attendance at a workshop. Workshop registration is discounted for AAAI-08 technical registrants. Registration information will be mailed directly to all invited participants. All workshop participants must preregister, and must indicate which workshop(s) they will be attending. Workshop reports are included in the workshop registration fee, and will be distributed onsite during the workshop. In most cases, reports will also be available after the conference as part of the AAAI Press technical report series.

## Submission Requirements

Submission requirements vary for each workshop, but most key deadlines are uniform, unless otherwise noted. Submissions are due to the organizers on April 7, 2008, except where noted. Workshop organizers will notify submitters of acceptance by April 21, 2008. Camera-ready copy is due back to workshop organizers by May 5, 2008 (working notes) and to AAAI by May 12, 2008. Please mail your submissions directly to the chair of the individual workshop according to their directions. Do not mail submissions to AAAI. For further information about a workshop, please contact the chair of that workshop.

## Format

AAAI two-column format is required for all final accepted submissions. Links to styles, macros, and guidelines for this format are located on the AAAI publications site.

## AAAI Workshop Chairs

Simon Parsons  
Brooklyn College, City University of New York  
[parsons@sci.brooklyn.cuny.edu](mailto:parsons@sci.brooklyn.cuny.edu)

Meinolf Sellman  
Brown University  
[sello@cs.brown.edu](mailto:sello@cs.brown.edu)

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- W1: Advancements in POMDP Solvers
- W2: AI Education Workshop
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- W4: Enhanced Messaging
- W5: Human Implications of Human-Robot Interaction
- W6: Intelligent Techniques for Web Personalization and Recommender Systems
- W7: Metareasoning: Thinking about Thinking
- W8: Mobile Robot Workshop
- W9: Fourth Multidisciplinary Workshop on Advances in Preference Handling
- W10: Search in Artificial Intelligence and Robotics
- W11: Spatial and Temporal Reasoning
- W12: Trading Agent Design and Analysis
- W13: Transfer Learning for Complex Tasks
- W14: What Went Wrong and Why: Lessons from AI Research and Applications
- W15: Wikipedia and Artificial Intelligence: An Evolving Synergy

Over the past decade, much advancement was achieved in the field of POMDP solvers. The size of POMDPs that solvers can handle has increased by orders of magnitude. Solvers developed ten years ago were hardly able to handle more than 10 states, while modern solvers scale up to models with millions of states. New techniques compute approximate policies of manageable complexity, thus handling larger and more complicated POMDPs. This advancement was achieved by a few orthogonal approaches — point-based techniques, finite-state controllers, efficient model representations, model compression techniques, hierarchical decompositions, inference-based techniques, and online search.

This workshop is designed to bring together researchers working on POMDP solvers, as well as those with complimentary interests. A main objective is to identify remaining barriers preventing full-scale POMDP deployment, as well as key scientific opportunities. The workshop is also intended to introduce new people to the current advancements in POMDP solvers.

The workshop will begin with a set of short tutorials over various advancements in POMDP solvers:

1. Point based algorithms — Introduction to point-based algorithms, including the basic operations, and overview of state of the art algorithms.
2. Compression and efficient representation — various techniques for compressing POMDPs and representing factored POMDPs.
3. Online belief space search — survey of algorithms and advancements in online belief space search.
4. Policy iteration algorithms — using techniques such as finite state controllers to efficiently learn policies directly, without computing a value function.

The workshop will continue by a set of short presentations of work in the field of POMDP solvers. Accepted papers will have 15 minutes for presentation of the main contributions. We will then follow up by a poster presentation of all accepted papers that will allow for an extended discussion with the authors of the papers.

## Submissions

We invite researchers in the field to submit papers discussing the following:

- New methods for solving POMDPs.
- Improvements of existing solvers.
- Empirical studies that illuminate the difficulties and opportunities in POMDP solvers.
- Complimentary methods for optimal control under partial observability.
- Studies of implementations of POMDP solvers to real life problems.

All submissions must follow standard AAAI guidelines. A PDF or PostScript version of the paper should be submitted by e-mail to [guyshani@microsoft.com](mailto:guyshani@microsoft.com).

## Organizing Committee

Joelle Pineau, McGill University ([jpineau@cs.mcgill.ca](mailto:jpineau@cs.mcgill.ca)); Pascal Poupart, University of Waterloo ([ppoupart@cs.uwaterloo.ca](mailto:ppoupart@cs.uwaterloo.ca)); Guy Shani, Microsoft Research ([guyshani@microsoft.com](mailto:guyshani@microsoft.com), 425-705-1561); Trey Smith, Carnegie Mellon University West / NASA Ames Research Center ([trey.smith@west.cmu.edu](mailto:trey.smith@west.cmu.edu))

## Additional Information

For additional information, please visit the supplemental workshop site ([research.microsoft.com/~guyshani/AAAIWorkshop/Main.html](http://research.microsoft.com/~guyshani/AAAIWorkshop/Main.html)).

The workshop on AI Education creates a forum where teaching techniques, curricular resources, and innovations in teaching AI are shared broadly, with an overarching goal of improving AI education at both the undergraduate and graduate levels. To this end, the workshop welcomes paper submissions on a variety of topics, including, but not limited to the following:

- Educational resources, including syllabi, assignments, project ideas, and pedagogical strategies, related to teaching AI in postsecondary environments
- Multidisciplinary curricula highlighting the application of AI in other contexts (computational biology, algorithmic game theory, computational economics, and so on) or the theoretical concepts of roots of AI from other fields (philosophy, cognitive science, linguistics, psychology)
- The use of robotics and other tangible media both in AI courses and elsewhere in the curriculum
- Software that assists the teaching/learning process — everything from software to help visualize search spaces and search algorithms, to software substrates that can be used by students to do projects
- Resources and strategies for teaching specific AI subareas or topics: machine learning, robotics, computer vision, natural language processing, game playing, and many others
- Strategies for appropriately situating AI within a wider computer-science curriculum
- Ways to incorporate or address popular entertainment and media portrayal of AI (in movies, news, advertisements, new products, and so on)
- Real-world examples of successful AI deployments, described in sufficient detail to provide case studies and/or serve as useful springboards for other teachers
- Innovative means for integrating research as part of coursework in AI

This workshop is a centerpiece of the AAAI 2008 Teaching Forum, ([www.aaai.org/Conferences/AAAI/2008/aaai08teaching.php](http://www.aaai.org/Conferences/AAAI/2008/aaai08teaching.php)) a series of AAAI events that create a “teaching track” through the conference. Four events constitute the Teaching Forum: this workshop, a video session track, a panel in the main technical program, and a subset of the conference’s poster presentations.

## Submissions

Papers between 2–6 pages should be submitted in PDF format via e-mail attachment to cochair Zachary Dodds at [dodds@cs.hmc.edu](mailto:dodds@cs.hmc.edu) by April 7, 2008; details on submission will appear on the workshop’s supplemental webpage. Although initial submissions need not follow a particular style, final versions of accepted papers (due May 5, 2008) must heed AAAI formatting guidelines for publication. AAAI will publish the AI Education workshop proceedings as a technical report. In addition, selected topics from the workshop may be presented within a panel session or as posters at AAAI

2008. Please address any questions, concerns, or comments to the cochairs.

## Cochairs

Zachary Dodds ([dodds@cs.hmc.edu](mailto:dodds@cs.hmc.edu)); Haym Hirsh ([hhirsh@nsf.gov](mailto:hhirsh@nsf.gov)); Kiri Wagstaff ([kiri.wagstaff@jpl.nasa.gov](mailto:kiri.wagstaff@jpl.nasa.gov))

## Additional Information

For additional information, please visit the supplemental workshop site ([www.cs.hmc.edu/aieducation/](http://www.cs.hmc.edu/aieducation/)).

# Coordination, Organization, Institutions and Norms in Agent Systems (COIN)

In recent years, social and organizational aspects of agency have become a major issue in MAS research.

Recent applications of MAS on web services, grid computing and ubiquitous computing enforce the need for using these aspects in order to ensure social order within these environments. Openness, heterogeneity, and scalability of MAS pose new demands on traditional MAS interaction models. Therefore, the view of coordination and control has to be expanded to consider not only an agent-centric perspective but societal and organization-centric views as well. The overall problem of analyzing the social, legal, economic and technological dimensions of agent organizations, and the coevolution of agent interactions, provide theoretically demanding and interdisciplinary research questions at different levels of abstraction. The MAS research community has addressed these issues from different perspectives that have gradually become more cohesive around the four notions that give title to the workshop: coordination, organization, institutions, and norms. In order to reach those different research communities working in related topics, COIN will facilitate and coordinate the organization of twin yearly events colocated with large international conferences, diverse in focus and geographically. The COIN workshop series, started in 2005 and have been held yearly since, as a dual event at two world class conferences, in different geographic regions. In 2008, COIN is planned to colocate with AAAI in Chicago and AAMAS in Portugal.

Topics of interest for COIN are as follows:

- Modeling multiagent organizations
- Models and architectures for social agents
- Coordination in dynamic and emergent agent organizations
- Organization design, monitoring and adaptation
- Ontologies, methodologies, tools and standards for regulated MAS.
- Social science background for regulated MAS: Roles, authority, motivation, social power and other social relationships and attitudes.
- Languages for norms: expressiveness VS efficiency.
- Electronic institutions and virtual organizations.
- Coordination and interaction conventions, technologies and artifacts.
- Institutional aspects of peer to peer interactions
- Issues in regulatory dynamics (creation, evolution, change, disappearance).
- Issues in regulated MAS implementation
- Simulation, analysis and verification of regulated MAS
- Engineering organizations (validation, implementation and tools for agent organizations
- Scaling and control issues in agent organizations
- Norms, institutions and organizations: authority, power, dependence, penalty and sanctions, contracts, trust, reputation as regulating tools for autonomous agents within organizations
- Application of organizational theory to MAS

- Simulation, analysis and verification of dynamics of multiagent organizations
- Dynamic, adaptive and emergent organizational structures
- Practical applications of agent organization systems

Practice and theory in agent organizations require the collaboration between several disciplines with and without the traditional AI field (including social sciences, management theory, software engineering, communication), which places this workshop at the crossroads between AI and other fields. The workshop will be fueled by the tension between different relevant disciplines, and between formal methods and practical applications and input technologies. The workshop organization will explicitly aim at a balanced discussion of these aspects.

## Format

We aim for a one-day workshop that combines an invited talk by a leading researcher (to be determined) with paper presentations and ample time for general and/or group discussions. We are seeking papers that clearly exemplify central notions in a research field or try to synthesize unified views. To encourage interaction and a broad exchange of ideas, the workshop will be limited to 30 participants.

## Submissions

Submissions may discuss work in any stage of development, from concepts and future directions to finished work. Authors should submit an extended abstract (3–4 pages) or a full paper of up to 8 pages, in the AAAI format. Manuscripts are expected to be in English (with American spelling preferred). Only PDF submissions will be accepted. Papers should be submitted to Virginia Dignum at [virginia@cs.uu.nl](mailto:virginia@cs.uu.nl).

## Organizing Committee

Virginia Dignum (Co-organizer; Contact person)  
University of Utrecht Information Science Group  
P.O. Box 80089, 3508 TB Utrecht, The Netherlands  
e-mail: [virginia@cs.uu.nl](mailto:virginia@cs.uu.nl)  
Telephone: +31 (0) 30 253 9492  
Fax: +31 (0) 30 351 3791

Eric Matson (Co-organizer)  
Wright State University, College of Engineering  
303 Russ Engineering Center Dayton, OH 45435-0001  
e-mail: [eric.matson@wright.edu](mailto:eric.matson@wright.edu)  
Telephone: 01 (973) 775-5108  
Fax: 01 (973) 775-5133

## Additional Information

For additional information, please visit the supplemental workshop site ([agents.cs.wright.edu/coin@aaai/](http://agents.cs.wright.edu/coin@aaai/)).

**W**ith the rise of the digital workplace, e-mail has become a ubiquitous tool in the office and a primary means of communication. e-mail's growth has created new opportunities and challenges for a large variety of artificial intelligence research, focusing an increasing amount of academic and industrial research on e-mail issues. Research seeks to enhance the e-mail user experience by addressing e-mail overload or to learn from e-mail social patterns. Recent papers have dealt with e-mail triage, activity management, e-mail prioritization, summarization, topic tracking, sorting, leak detection, social network analysis, and enhanced intelligent interfaces. The Enhanced Messaging workshop at AAAI 2008 brings together researchers working on solutions for e-mail and other forms of web messaging from many subfields of AI as well as soliciting participation from the broader community.

The workshop aims to bring together a wide spectrum of researchers working on e-mail and other messaging technologies to present new and novel areas of research on important problems in the field. We especially encourage research that brings together multidisciplinary techniques and production messaging systems that employ novel research technologies. The workshop will provide for discussions between participants on significant challenges in messaging research and set a multiyear agenda of important research goals for the field.

The day long workshop will consist of presentations, an invited talk and discussion session and posters. Workshop attendance is open to the public. Priority will be given to those active participants in the workshop (paper authors or speakers).

## Topics of Interest

Topics of interest include user studies, user interfaces, information retrieval, machine learning and data mining, message organization, social networks, natural language processing, and messaging interactions on the web.

## Submissions

We welcome three types of submissions. Full papers (6 pages) describe mature work, which may already have been published in previous conferences. Extended abstracts (2 pages) describe new and preliminary work. Demonstration Papers (2 pages) describe messaging systems and authors should expect to demonstrate their system during the workshop poster session.

## Organizing Committee

Vitor R. Carvalho (Carnegie Mellon University), Mark Dredze (University of Pennsylvania), Tessa Lau (IBM Almaden Research Center)

## Program Committee

Paul N. Bennett (Microsoft Research), William Cohen (Carnegie Mellon University), Gabor Cselle (Xobni Corp), Aron Culotta (University of Massachusetts), Laura Dabbish (Carnegie Mellon University), Jacek Gwizdka (Rutgers University), Jon Herlocker (Pi Corporation and Oregon State University), Nicholas Kushmerick (QL2 Software, Inc.), Andrew Lampert (CSIRO ICT Centre and Macquarie University), David R. Millen (IBM TJ Watson Research Center), Simone Stumpf (White Horse), Fernanda B. Viegas (IBM TJ Watson Research Center), Martin Wattenberg (IBM TJ Watson Research Center), Steve Whittaker (Sheffield University)

## Additional Information

For additional information, please send e-mail to [enhancedmessagingworkshop@gmail.com](mailto:enhancedmessagingworkshop@gmail.com). or visit the supplemental workshop site ([enhancedmessagingworkshop.googlepages.com](http://enhancedmessagingworkshop.googlepages.com)).

This workshop addresses important human implications of human-robot interaction (HRI) that call for research and dialogue representing AI and robotics as well as disciplines such as psychology, sociology, philosophy, and theology. Specific issues for the workshop arise from HRI involving results of rapidly growing robotic developments such as lifelike personal robots and direct technological enhancement of human bodies. Issues thus raised are represented in the following kinds of questions:

- How can notions of human identity be affected in the context of such HRI?
- How can understandings of human consciousness be affected?
- How can concepts of human freedom be affected?
- How can human social behavior be affected?
- How can ideas of human moral status and moral responsibility be affected?
- How can presumptions of human uniqueness be affected?

Our topic is timely for a number of reasons. First, public awareness of lifelike robots is accelerating. Second, introduction of artificially intelligent artifacts as functional components of the human body is notably becoming more feasible. Third, researchers directly involved in these developments have begun describing their visions of the human implications of their work. Fourth, our prior workshops in this topic area already have produced valuable on-site dialogue and AAAI technical reports at the AAAI-06 and AAAI-07 conferences. This 2008 workshop aims to continue successful support of an emerging multidisciplinary and international community of researchers.

Presentation of papers to an audience of 25–75 attendees at AAAI-08 in Chicago, USA, will be followed, during an afternoon session, by open discussion. Everyone invited to the workshop will have a background appropriate for participating in the discussion session, and all participants are invited to submit a paper. About 15 of the submitted papers will be accepted for presentation and inclusion in the workshop's AAAI technical report, while some others are expected to be accepted as poster papers.

## Submissions

Papers must be 5–8 pages in length, written in (or translated into) English, in AAAI style format, and submitted by April 7, 2008, as attached Microsoft Word or PDF documents, to [tmetzler@okcu.edu](mailto:tmetzler@okcu.edu).

## Organizing Committee

Ted Metzler (Chair) ([tmetzler@okcu.edu](mailto:tmetzler@okcu.edu); Oklahoma City University, Oklahoma City, OK, 73106, USA ; Fax: (405) 208-6046, Telephone: (405) 208-5511) and Lundy Lewis ([l.lewis@snhu.edu](mailto:l.lewis@snhu.edu)); Southern New Hampshire University, Manchester, NH, USA

## Additional Information

For additional information, please visit the supplemental workshop site ([starport.okcu.edu/SI/GS/](http://starport.okcu.edu/SI/GS/)).

# Intelligent Techniques for Web Personalization and Recommender Systems

**W**eb personalization aims at providing individual users or user groups with a web experience that is specifically tailored to them. Recommender systems represent one special and prominent class of such personalized Web applications, which particularly focus on the user-dependent filtering and selection of relevant information and, in an e-commerce context, aim to support online users in the decision-making and buying process.

To achieve effective personalization, a variety of types of data must be harnessed, including user profiles, web usage, content and structure, and domain knowledge. Efficient and intelligent techniques are needed to mine this data for actionable knowledge, and to effectively use the discovered knowledge to create user models. These techniques must address important challenges emanating from the size and the heterogeneous nature of the data itself, as well as the dynamic nature of user interactions with the web. These challenges include the successful integration of techniques from machine learning, information retrieval and filtering, databases, agent architectures, knowledge representation, data mining, statistics, and user modeling.

This workshop represents the sixth in a successful series of workshops that have brought together researchers and practitioners to foster an exchange of ideas, and to facilitate a discussion of current and emerging topics related to web intelligence, web mining, and personalization.

We invite original contributions in a variety of areas related to web personalization and recommender systems, including user modeling for personalization, user preference elicitation, personalization architectures and systems, privacy and security aspects, evaluation methodologies and metrics, and enabling technologies such as data mining, link analysis, web 2.0 and ontologies.

## Submissions

All submissions must be made electronically to workshop organizers. Please use the AAAI Press prescribed formatting instructions.

Papers should be no more than 12 pages inclusive of all references and figures. All papers must be submitted in PDF. At least one author for each accepted paper is expected to register for and attend the workshop.

The workshop proceedings will be published by AAAI Press as part of the AAAI technical report series and will be available on AAAI digital library. Selected papers from the workshop may be considered for expansion and inclusion in a special issue of a journal.

The workshop will be open to all those interested in attending.

## Organizing Committee

Bamshad Mobasher, School of Computer Science, DePaul University, Chicago, USA (mobasher@cs.depaul.edu); Sarabjot Singh Anand, Department of Computer Science, University of Warwick, UK (S.S.Anand@warwick.ac.uk); Alfred Kobsa, School of Information and Computer Sciences, University of California, Irvine, USA (kobsa@uci.edu); Dietmar Jannach, Institute of Applied Informatics, University Klagenfurt, Universitätsstraße 65-67, Austria (dietmar.jannach@uni-klu.ac.at)

## Additional Information

For additional information, please visit the supplemental workshop site ([maya.cs.depaul.edu/~mobasher/itwp08/](http://maya.cs.depaul.edu/~mobasher/itwp08/)).



The twenty-first century is experiencing a renewed interest in an old idea within artificial intelligence that goes to the heart of what it means to be both human and intelligent. This idea is that much can be gained by metareasoning, the process of reasoning about reasoning itself. This workshop will examine the various aspects of metareasoning including metalevel control, introspective monitoring and models of self and their role in single agent and multiagent applications.

To increase coherence of the workshop sessions and to help attendees to relate heterogeneous positions, all authors are required to include and reference at least one of a set of provided figures, either positively, negatively, or as a contrast to their own alternative models. The goal is to use this as a unifying theme.

## Potential Topics

- Theoretical models of metareasoning
- The integration of metalevel control and monitoring
- Multiagent coordinated metareasoning
- Metaexplanation and self-explanation
- Self-adaptive systems and autonomic computing
- Centralized versus distributed metalevel control
- Human metacognition and metamemory
- The role of state abstraction in metareasoning
- Computational models of self and consciousness
- Logical introspection and reflective logic programming
- Bounded rationality
- Learning agents and metareasoning
- Evaluation of metareasoning systems

## Format

This two-day workshop will include a number of short paper presentations, thematically organized discussion sessions, a break-out problem-solving session with discussion, and two speakers. We also will include panel discussions after each group of paper presentations so that the audience can ask follow up questions that compare and contrast the related positions. Finally a special track will be targeted for the topic of evaluation of metareasoning systems.

## Submissions

The submission should not exceed 8 pages in AAAI style, either in PostScript or PDF format. Submissions must be e-mailed to either chair (mcox@bbn.com or anraja@uncc.edu) by the deadline period and must include and reference at least one of the figures from [www.mcox.org/Metareasoning/Figs](http://www.mcox.org/Metareasoning/Figs). Short position statements are also accepted.

## Organizing Committee

Mike Cox, Cochair (BBN Technologies), Anita Raja, Cochair (University of North Carolina at Charlotte), Michael L. Anderson (Franklin & Marshall College), David Leake (Indiana University), Shlomo Zilberstein (University of Massachusetts)

## Program Committee

Vincent Conitzer, Stefania Constanini, Ed Durfee, Stan Franklin, Andrew Gordon, Eric Horvitz, Victor Lesser, Paul Robertson, Lenhart Schubert, Steve Smith

## Additional Information

For additional information, please visit the supplemental workshop site ([www.sis.uncc.edu/~anraja/MetaReasoning/](http://www.sis.uncc.edu/~anraja/MetaReasoning/)).

# Mobile Robot Workshop

**T**he Mobile Robot Workshop will be held Thursday, July 17, 2008. The workshop is an extension of the AAAI-08 Robotics program.

Further information about this workshop will be forthcoming.

# Multidisciplinary Workshop on Advances in Preference Handling

Preferences are a central concept of decision making and are becoming of increasing importance for computational fields such as artificial intelligence, databases, and human-computer interaction. Preference models are needed in decision-support systems such as web-based recommender systems and configurators, in autonomous systems such as Mars rovers, and in multiagent systems dealing with social choice problems. This broadened scope of preferences leads to new types of preference models, new problems for applying preference structures, and new kinds of benefits. Preferences are studied in many areas of artificial intelligence and are an inherently multidisciplinary topic, of interest to economists, computer scientists, operations researchers, mathematicians and more.

The workshop promotes this broadened scope of preference handling and continues a successful series of multidisciplinary events held at Dagstuhl in 2004, IJCAI-05, ECAI-06, and VLDB-07. The workshop provides a forum for presenting advances in preference handling and for exchanging experiences between researchers facing similar questions, but coming from different fields. The workshop builds on the large number of AI researchers working on preference-related issues, but also seeks to attract researchers from databases, multi-criteria decision making, economics, and so on.

The workshop addresses all computational aspects of preference handling. This includes methods for the elicitation, modeling, representation, aggregation, and management of preferences and for reasoning about preferences. The workshop studies the usage of preferences in computational tasks from decision making, database querying, web search, personalized human-computer interaction, personalized recommender systems, e-commerce, multiagent systems, game theory, social choice, combinatorial optimization, planning and robotics, automated problem solving, perception and natural language understanding and other computational tasks involving choices. The workshop seeks to improve the overall understanding of the benefits of preferences for those tasks. Another important goal is to provide cross-fertilization between different fields.

A mixture of presentations with ample time for questions and open panel discussions during two days.

Researchers interested in preference handling may submit a paper or send a statement of interest in participation.

## Submissions

We solicit electronic submissions of papers (5–6 pages in PDF, formatted in AAAI style) by e-mail to

Ulrich Junker  
ILOG  
1681, route des Dolines  
F-06560 Valbonne  
Telephone: +33-492966201  
Fax: +33-492966162

[ujunker@ilog.fr](mailto:ujunker@ilog.fr)

## Organizing Committee

Jan Chomicki, University at Buffalo ([chomicki@cse.buffalo.edu](mailto:chomicki@cse.buffalo.edu)), Vincent Conitzer, Duke University ([conitzer@cs.duke.edu](mailto:conitzer@cs.duke.edu)), Ulrich Junker, ILOG ([ujunker@ilog.fr](mailto:ujunker@ilog.fr)), Patrice Perny, LIP6 ([Patrice.Perny@lip6.fr](mailto:Patrice.Perny@lip6.fr)).

## Program Committee

Wolf-Tilo Balke, Craig Boutilier, Ronen Brafman, Felix Brandt, Jan Chomicki, Paolo Ciaccia, Vincent Conitzer, James Delgrande, Carmel Domshlak, Jon Doyle, Matthias Ehrgott, Edith Elkind, Judy Goldsmith, Sergio Greco, Ulrich Junker, Werner Kießling, Jerome Lang, Amelie Marian, Barry O'Sullivan, Jian Pei, Patrice Perny, Ariel Procaccia, Francesca Rossi, Alexis Tsoukias, Panos Vassiliadis, Toby Walsh, Neil Yorke-Smith.

## Additional Information

For additional information, please visit the supplemental workshop site ([wikix.ilog.fr/wiki/bin/view/PreferenceWS/MdPref08](http://wikix.ilog.fr/wiki/bin/view/PreferenceWS/MdPref08)).

**H**euristic search and combinatorial optimization are currently very active areas of research. For example, researchers investigate how to search in real-time, how to search with limited (possibly external) memory, how to solve sequences of similar search problems faster than with isolated searches, how to improve the runtime of the searches over time, how to trade-off between the runtime and memory consumption of the search and the resulting solution quality, and how to focus the searches with sophisticated heuristics such as pattern databases. Their results are published in different conferences such as the IJCAI, AAAI, ICAPS, CP, NIPS, ICRA, and IROS.

This two-day workshop is meant to bring these researchers together to exchange their ideas and cross-fertilize the field. Thus, in addition to seeking separate answers to questions like how to design more accurate memory-based heuristics, more I/O-efficient disk-based search algorithms, or more efficient clause-learning strategies, the workshop will stimulate thoughts on combining various techniques originated from different areas of search.

Topics relevant to this workshop include, but are not limited to clause learning, solving sequences of similar search problems, external-memory and parallel search, incremental and active learning in search, pattern databases, portfolios of search algorithms, random versus systematic search strategy selection, real-time search, search focus in goal-directed problem solving, search space discretization for continuous state-space problems, and time, memory, and solution quality tradeoffs. Submissions that connect together multiple search topics listed or not listed above will be given precedence.

## Submissions

We anticipate a two-day workshop with invited speakers, a poster session, and a panel discussion. We also intend to foster a discussion regarding a recurring specialized venue for heuristic search and related algorithms. Those interested in attending should submit either a technical paper (AAAI style, 6 pages preferred, 8 pages maximum) or statement of research interests (2 pages maximum) in PDF format via the ConfMaster site linked from the supplemental workshop homepage. All submitted papers will be carefully peer-reviewed by multiple reviewers and low-quality or off-topic papers will not be accepted.

## Organizing Committee

David Furcy (University of Wisconsin Oshkosh, [furcyd@uwosh.edu](mailto:furcyd@uwosh.edu)), Sven Koenig (University of Southern California, [skoenig@usc.edu](mailto:skoenig@usc.edu)), Wheeler Ruml (University of New Hampshire, [ruml@cs.unh.edu](mailto:ruml@cs.unh.edu)), Rong Zhou (Palo Alto Research Center, [rzhou@parc.com](mailto:rzhou@parc.com)).

## Additional Information

For additional information, please visit the supplemental workshop site ([www.uwosh.edu/faculty\\_staff/furcyd/search\\_symposium\\_2008/](http://www.uwosh.edu/faculty_staff/furcyd/search_symposium_2008/)).

This workshop is intended as a forum for discussion, exchange of points of view, assessment of results and methods, and as a source of dissemination and promotion of the newest advances in the area of spatial and temporal reasoning. Recent years have witnessed remarkable advances in some of the longstanding problems of the field (for instance, new results about tractability for spatial calculi, explicit construction of models, characterization of important subclasses of relations), as well as in the development of new areas (the appearance of new integrated spatiotemporal calculi is one example, as well as the development of multidimensional spatial calculi). Likewise, proposals have been made to remedy some of the weak points of the symbolic approach, by introducing fuzzy versions of classical calculi, or importing nonmonotonic techniques for dealing with incomplete information. At the same time, leaders in AI have sounded the need for solving real problems and making the work on representation and reasoning relevant to the real world.

The workshop consists of two parts, one part of original submissions and a second part of highlights, where the program committee of the workshop invites selected papers that have been published elsewhere in the preceding year to be presented and discussed again at the workshop. The idea is to give every workshop participant the opportunity to get updated about the latest trends and new landmark papers in the area of spatial and temporal representation and reasoning and to discuss these papers in detail.

Up to 40 participants will be selected to attend the workshop, contributing and participating in discussions. Accepted papers will be included in the workshop notes, which will be published in the AAAI technical report series. Screening will be based on reviews and relevance to the workshop goals.

## Submissions

Interested authors should format their papers according to the AAAI instructions for authors and should submit their paper by e-mail to Hans Guesgen. Papers should not exceed 10 pages and should be in the form of an extended abstract or complete research, survey, or position paper. Selection of participants will be based on relevance to the indicated focus of the workshop, clarity of the work submitted, and the strength of the research.

## Workshop Cochairs

Hans W. Guesgen (primary contact)  
Institute of Information Sciences and Technology  
Massey University  
Private Bag 11222  
Palmerston North, New Zealand  
h.w.guesgen@massey.ac.nz

Gerard Ligozat  
LIMSI, Université Paris-Sud  
P. O. Box 133  
91403 Orsay, France  
ligozat@lmsi.fr

Rita V. Rodrigues  
CISE Computing Research Infrastructure (CRI)  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, VA 22230  
rrodrigu@nsf.gov

## Additional Information

For additional information, please visit the supplemental workshop site ([www-ist.massey.ac.nz/hwguesgen/spacetime/aaai08strws/](http://www-ist.massey.ac.nz/hwguesgen/spacetime/aaai08strws/)).

**T**rading agents have become a prominent application area in artificial intelligence because of their potential benefits in electronic commerce, and because they present a stiff challenge to models of rational decision-making. A wide variety of trading scenarios and agent approaches have been studied, creating a broad and rich research area. This workshop will focus on the design and evaluation of trading agents. Papers on trading agent architectures, decision-making algorithms, theoretical analysis, empirical evaluations of agent strategies in negotiation scenarios, and game-theoretic analyses, are all within the scope of the workshop.

We expect to accept 9–10 papers for 20-minute presentations, and a few for poster presentation. In addition to the technical papers, we will reserve time during the day for presentations or panels related to the ongoing TAC-08 competition. Attendance at the workshop will be limited to about 75.

## Submissions

Papers should be up to 8 two-column pages, not including references. Manuscripts are expected to be in English, in either PostScript or PDF format. Papers must be formatted in accordance with AAAI publication standards. Submissions should be sent by e-mail to [wketter@rsm.nl](mailto:wketter@rsm.nl).

## Organizing Committee

Wolfgang Ketter (Rotterdam School of Management, Erasmus University), Alex Rogers (Southampton University), Norman Sadeh (Carnegie Mellon University), William Walsh (CombineNet)

## Program Committee

Michael Benisch (Carnegie Mellon University), Ken Brown (University College Cork), John Collins (University of Minnesota), Maria Fasli (Essex University), Shaheen Fatima (University of Liverpool), Enrico Gerding (University of Southampton), Maria Gini (University of Minnesota), Amy Greenwald (Brown University), Sverker Janson (Swedish Institute of Computer Science), Patrick Jordan (University of Michigan), Kate Larson (University of Waterloo), Kevin Leyton-Brown (University of British Columbia), Peter McBurney (University of Liverpool), Pericles A. Mitkas (Aristotle University of Thessaloniki), Tracy Mullen (Penn State University), Benno Overeinder (Vrije Universiteit Amsterdam), Julian Padget (University of Bath), David Pardoe (University of Texas at Austin), Simon Parsons (Brooklyn College, City University of New York) (Juan Antonio Rodriguez Aguilar, IIIA-CSIC (Catalonia), Jeffrey Rosenschein (Hebrew University of Jerusalem), Alberto Sardinha (Carnegie Mellon University), Peter Stone (University of Texas at Austin), Ioannis A. Vetsikas (University of Southampton), Michael Wellman (University of Michigan), Dongmo Zhang (University of Western Sydney), Haizheng Zhang (Penn State University)

## Additional Information

For additional information, please visit the supplemental workshop site ([tac.cs.umn.edu/tada08/cfp.html](http://tac.cs.umn.edu/tada08/cfp.html)).

All machine learning algorithms require data to learn and often the amount of data available is a limiting factor. Classification requires labeled data, which may be expensive to obtain. Reinforcement learning requires samples from an environment, which takes time to gather. Recently, transfer learning (TL) approaches have been gaining in popularity as an approach to increase learning performance. Rather than learning a novel target task in isolation, transfer approaches make use of data from one or more source tasks in order to learn the target task with less data or to achieve a higher performance level.

- While transfer has long been studied in humans, it was first applied as a machine learning technique only in the mid 1990s. Although TL is making rapid progress, there are a number of open questions in the field, including:
- How can an appropriate source task be selected for a given target task?
- In some situations transfer decreases performance. Is it possible to avoid negative transfer?
- How can one learn the relationship between a given source and target task, if such a relationship exists?
- What characteristics determine the effectiveness of transfer?

This workshop will give researchers working in TL an opportunity to both present their work and to discuss current topics of interest. We solicit papers that demonstrate empirical success in transferring knowledge between complex tasks, or introduce transfer methods that are likely to scale to such problems. We are most interested in work which examines transfer between reinforcement learning agents, but transfer between any machine learning algorithms will be in scope for this workshop. All submissions will be reviewed for relevance, originality, significance, and clarity. Work will be accepted for either oral or poster presentation.

## Submissions

Workshop submissions should be in PDF format only, and sent via e-mail to [mtaylor@cs.utexas.edu](mailto:mtaylor@cs.utexas.edu). Papers should be in AAAI style and may not exceed 6 pages. Submissions are due no later than April 7, 2008. At least one author of each accepted paper is expected to register for the workshop and present the contribution.

## Organizing Committee

Matthew E. Taylor (primary contact: [mtaylor@cs.utexas.edu](mailto:mtaylor@cs.utexas.edu), The University of Texas at Austin), Alan Fern (Oregon State University), and Kurt Driessens (K. U. Leuven)

## Senior Steering Committee

Peter Stone (The University of Texas at Austin), Richard Maclin (The University of Minnesota), and Jude Shavlik (The University of Wisconsin at Madison)

## Additional Information

For additional information, please visit the supplemental workshop site ([www.cs.utexas.edu/~mtaylor/AAAI08TL/](http://www.cs.utexas.edu/~mtaylor/AAAI08TL/)).

# What Went Wrong and Why: Lessons from AI Research and Applications

Bugs, glitches, and failures shape research and development by charting the boundaries of technology; they identify errors, reveal assumptions, and expose design flaws. When a system works we focus on its input/output behavior; but when a problem occurs, we examine the mechanisms that generated behavior to account for the flaw and hypothesize corrections. This process produces insight and forces incremental refinement. In a sense, failures are the mother of necessity, and therefore the grandmother of invention.

Unfortunately, bugs, glitches, and failures are rarely mentioned in academic discourse. Their role in informing design and development is essentially lost. The first What Went Wrong and Why workshop during the 2006 AAAI spring symposium started to address this gap by inviting AI researchers and system developers to discuss their most revealing bugs, and relate problems to lessons learned. Revised versions of the articles and the invited talks will be published as a special issue of *AI Magazine*.

The first workshop clarified that WWWW experiences can be studied at three different levels of abstraction: the Strategic (AI research in general), Tactical (research area) and Execution (project or implementation) levels. An additional category turned out to be the study of how, why and when failures occur in the first place.

The second workshop will continue our analysis of failures in research. In addition to examining the links between failure and insight, we would like to determine if there is a hidden structure behind our tendency to make mistakes that can be utilized to provide guidance in research.

## Submissions

As such, we invite researchers to submit papers ( $\leq 8$  pages in AAAI format) connecting problems they have encountered to lessons learned on the tactical or execution level. We would also welcome papers on the study of failures themselves. We encourage authors to elaborate on what they believe was the source cause of the failure, how the problem helped them arrive at a better solution, and to suggest a broader categorization of failures and how to utilize them. Submissions (in PDF format) should be directed to [submissions@whatwentwrongandwhy.org](mailto:submissions@whatwentwrongandwhy.org).

## Workshop Chairs

Mehmet H. Göker, PricewaterhouseCoopers, CAR, ([mehmet.goker@us.pwc.com](mailto:mehmet.goker@us.pwc.com)) and Daniel Shapiro, CSLI/Stanford University, & Applied Reactivity, Inc. ([dgs@stanford.edu](mailto:dgs@stanford.edu))

## Program Committee

David Aha (Naval Research Laboratory), Ralph Bergmann (Universität Trier, Lehrstuhl für Wirtschaftsinformatik II), Carl Hewitt (MIT EECS, emeritus), Jean-Gabriel Ganascia (University Pierre et Marie Curie, LIP6), David Leake (Indiana University, Computer Science Department), Doug Lenat (Cycorp Inc.), Ramon Lopez de Mantaras (CSIC Artificial Intelligence Research Institute), Edwina Rissland (University of Massachusetts Amherst, Department of Computer Science), Ted Senator (SAIC)

## Additional Information

For additional information, please visit the supplemental workshop site ([www.whatwentwrongandwhy.org](http://www.whatwentwrongandwhy.org)).



**W**ikipedia has become one of the largest and fastest growing online sources of encyclopedic knowledge. As a large-scale repository of structured knowledge, Wikipedia can be a valuable resource for a diverse set of artificial intelligence (AI) applications. Major conferences in natural language processing and machine learning have recently witnessed a significant number of approaches that use Wikipedia for tasks ranging from text categorization and clustering to word sense disambiguation, information retrieval, information extraction and question answering. On the other hand, Wikipedia can greatly benefit from numerous algorithms and representation models developed during decades of AI research, as illustrated recently in tasks such as estimating the reliability of authors' contributions, automatic linking of articles, or intelligent matching of Wikipedia tasks with potential contributors.

The goal of this workshop is to foster the research and dissemination of ideas on the mutually beneficial interaction between Wikipedia and AI. The workshop is intended to be highly interdisciplinary. We encourage participation of researchers working on Wikipedia from different perspectives, including (but not limited to) machine learning, computational linguistics, information retrieval, information extraction, question answering, knowledge representation, and others. We also encourage participation of researchers from other areas who might benefit from the use of a large body of machine-readable knowledge.

We invite submissions of papers addressing the following or related topics: Using Wikipedia as a source of training data for AI tasks; automatic methods for improving the quality of Wikipedia pages; integrating Wikipedia with existing ontologies; extracting annotated data from Wikipedia; enriching Wikipedia with new types of structural information; Wikipedia and the semantic web / web 2.0; Automatic extraction and use of cross-lingual information from Wikipedia; Computerized use of satellite projects such as Wiktionary, Wikibooks or Wikispecies.

The day long workshop will consist of presentations, invited talk, demos showcasing work presented in the research papers, and a panel session.

## Submissions

We invite submissions of regular full papers (up to 6 pages), short papers reporting on late-breaking results (up to 3 pages), and descriptions of system demonstrations (up to 1 page) using AAAI style. Detailed submission instructions are available at the supplemental web site.

## Organizing Committee

Razvan Bunescu, Ohio University (bunescu@ohio.edu); Evgeniy Gabrilovich, Yahoo! Research (gabr@yahoo-inc.com); Rada Mihalcea, University of North Texas (rada@cs.unt.edu)

## Additional Information

For additional information, please visit the supplemental workshop site ([lit.csci.unt.edu/~wikiai08/index.php/Main\\_Page](http://lit.csci.unt.edu/~wikiai08/index.php/Main_Page)).

