Twenty-Second AAAI Conference on Artificial Intelligence (AAAI-07)

Workshop Program

July 22–23, 2007

Vancouver, British Columbia, Canada

Sponsored by the
Association for the
Advancement of Artificial Intelligence

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Deadlines

- April 10: Submissions due
- April 25: Notification of acceptance
- May 15: Camera-ready copy due to organizers and AAAI
- July 22–23: AAAI-07 Workshop Program

AAAI Formatting Guidelines

- www.aaai.org/Publications/Author/author.php

AAAI is pleased to present the AAAI-07 Workshop Program. Workshops will be held Saturday and Sunday, July 22–23, 2007 at the Hyatt Regency Vancouver. Exact locations and dates for the workshops will be determined in early spring. The AAAI-07 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-07 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 10, 2007, except where noted. Workshop organizers will notify submitters of acceptance by April 25, 2007. Camera-ready copy (formatted in AAAI style) is due back to workshop organizers by May 15, 2007 (working notes) and to AAAI by May 22, 2007. 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 (AAAI style) is often required for workshop submissions, and will be required for all final accepted submissions. For formatting instructions and sample documents, see the author instructions page.

AAAI Workshop Chairs

Simon Parsons (parsons@sci.brooklyn.cuny.edu)
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Brooklyn College
City University of New York
Robert Givan (givan@purdue.edu)
School of Electrical and Computer Engineering
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Contents

The titles of the fifteen AAAI workshops are:

Deadlines

Deadlines and a link to formatting guidelines are provided in the shaded box above.

Acquiring Planning Knowledge Via Demonstration

In the mid-to-late 1980s there was a flurry of papers on various types of explanation-based techniques being applied to learning how to perform actions by observing human performance in a domain. For example, in 1987, Segre demonstrated a system that would observe a human solving a single robot-assembly planning problem, and would then be able to generalize this to a large set of related planning problems. However, as statistical approaches gained in power and popularity, and as the amount of data and datasets available through the web proliferated, machine learning has moved in that direction and away from learning from a single example or using a strong domain model. Recently, however, new efforts have begun to once again look at explanation-based learning. This workshop is an attempt to explore these new efforts, especially in the area of learning planning knowledge.

Topics of interest include the following:

- Learning to plan by observing a human
- Combining observations and advice for learning
- Evaluating one-shot learning
- Representations for planning that are more easily learned
- Use of domain models in learning
- Taking advantage of semantic web (OWL) knowledge in learning
- New approaches to explanation based learning
- Case-based and analogical learning from sparse observations
- Studies of how people teach by, and learn from, demonstration

Format

This workshop will be a mixture of invited talks, panels, and posters or presentations by attendees.

Submissions

Those who want to attend should submit a short abstract (1–2 pages PDF) describing their work and/or interest. Those with accepted abstracts will be invited to submit a short paper to the workshop proceedings. Submitters should send the abstract as an attachment to an e-mail including their full contact information (electronic and surface mail) to aaai07.ilworkshop@gmail.com.

Organizing Committee

Mark Burstein (burstein@bbn.com), Tom Dietterich (tgd@eecs.oregonstate.edu), Jim Hendler, chair (hendler-atcs.rpi.edu) and Drew McDermott (drew.mcdermott@yale.edu).

Configuration

This workshop continues the series of nine successful configuration workshops started at the AAAI 1996 Fall Symposium and continued alongside IJCAI, AAAI, and ECAI since 1999. The main goal of the workshop is to promote high-quality research in all technical areas related to configuration and to bring together researchers and practitioners from industry and academia. The workshop is of interest to both AI researchers and industry representatives interested in the relationship between configuration technology and the business problem behind configuration and mass customization.

Areas of interest include the following:

- Configuration problems and models
  (structure of configuration problems; knowledge representation and acquisition; fuzzy and incomplete knowledge; knowledge base verification, validation and diagnosis; standardization of catalog exchange formats; configuration problems, including discrete/continuous/mixed constraints; product and process configuration; service configuration; product design and configuration).
- Reasoning methods
  (constraint satisfaction problems and extensions, preference based reasoning, description logics, rules, case-based reasoning, SAT-solving, local search, genetic algorithms, neural networks, problem decomposition, optimization, multicriteria optimization, symmetry breaking, cooperative configuration processes, reconfiguration of existing systems, explanations, distributed problem solving, benchmark proposals, [knowledge-based] recommendation).
- Interactivity and e-business
  (personalization, ontology, intelligent man machine interaction, machine learning, client/server architecture, configuration web service, distributed configuration, configuration process modeling).
- Integration into the business process
  (product data management, CAD, pricing, ERP, CRM, process configuration).
- Applications and tools
  (configuration tools, design tools, application reports, case studies, real-world challenges, test environments for configuration knowledge bases).

Submissions

Workshop participation will be by invitation only. If you would like to participate, submit either a full paper of no more than 6 pages (or 6,000 words), or a position statement, short paper, or problem instance (at most 3 pages or 3,000 words). Short papers may address an important problem for further research or describe a practical problem or an interesting lesson learned. In addition, we solicit proposals for short demonstrations (at most 3 pages with demonstrations taking at most 15 minutes). See the workshop's supplemental web page for details on the submission procedure.

Workshop Chairs

Barry O'Sullivan (b.osullivan@cs.ucc.ie) (University College Cork, Ireland) and Klas Orsvarn (klas.orsvarn@tacton.com) (Tacton System AB, Sweden).

Organizing Committee

Claire Bagley (Oracle Corporation USA), Alexander Felfernig (University Klagenfurt, Austria), Esther Gelle (ABB Corporate Research AG, Switzerland), Barry O'Sullivan (University College Cork, Ireland), Klas Orsvarn (Tacton System AB, Sweden).

Additional Information

For additional information and a complete list of the program committee, please visit the supplemental workshop website.

Evaluating Architectures for Intelligence

Cognitive architectures form an integral part of robots and agents. Architectures structure and organize the knowledge used by the agents to select actions in dynamic environments, plan and solve problems, learn, and coordinate with others. Architectures serve to integrate general capabilities expected of an intelligent agent (such as planning and learning), to implement and test theories about agent cognition, and to explore domain-independent mechanisms for intelligence.

As AI research has improved in formal and empirical rigor, traditional evaluation methodologies for architectures have sometimes proved insufficient. Formal analysis has often proved elusive; we seem to be missing the notation required for proving properties of architectures. Experiments that demonstrate generality are notoriously expensive to perform, are not sufficiently informative, and, at a high-level, evaluation is difficult because the criteria are not well defined: Is it generality? Ease of programmability? Compatibility with data from biology and psychology? There are no established evaluation methodologies and only a handful of established evaluation criteria.

Recognizing that scientific progress depends on the ability to conduct informative evaluation (by experiment or formal analysis), this workshop will address the methodologies needed for evaluating architectures. The focus is on methodology, rather than specific architectures. The workshop has two goals — to promote discussion and to propose evaluation criteria that will be accepted by the research community as recognized evaluation guidelines.

Key questions for consideration include the following:

- What are the underlying research hypotheses one explores with architectures?
- What functions or characteristics turn an architecture into a architecture supporting intelligence?
- How are architectures to be compared in an informative manner?
- Are different types of evaluation needed for different types of cognitive architectures?
- What are the criteria and scales of evaluation?
- How should we validate the design of a cognitive architecture?
- Are there any relevant formal methods? Can we prove properties of architectures?
- Can we develop a common ontology for describing architectures and/or the various sets of requirements against which they can be evaluated?
- How can data sets and benchmarks (standardized tasks) be used to evaluate architectures?

Workshop Cochairs

Gal Kaminka (galk@cs.biu.ac.il) and Catherina Burghart (burghart@ira.uka.de)

Evaluation Methods for Machine Learning

The purpose of this workshop is to continue the lively and interesting debate that started last year at the AAAI 2006 workshop on evaluation methods for machine learning. The previous workshop was successful on the following points:

It established that the current means of evaluating learning algorithms has some serious drawbacks.

It established that there are many important properties of algorithms that should be measured, requiring more than a single evaluation metric.

It established that algorithms must be tested under many different conditions.

It established that the UCI data sets do not reflect the variety of domains to which algorithms are applied in practice.

For this year's workshop, we intend to address, in a more specific fashion, some of the topics that were raised at last year's workshop and some new ones. Last year's participants are invited to submit papers reflecting the evolution of their views within the year, or new ideas. Researchers, or practitioners, interested in this issue who did not get a chance to submit a paper last year are invited to do so this year.

Topics

We invite position papers and technical papers addressing three main topics, and their subtopics:

- Evaluation metrics
  - The efficacy of existing evaluation metrics
  - The need for new metrics
  - Useful metrics from the other fields
  - Single number summaries versus curves
  - New performance visualization methods
- Statistical issues
  - Cross-validation versus bootstrap
  - Bias versus variance
  - Parametric versus nonparametric
  - The power of tests
  - Sampling methods
  - Multiple comparisons
- Data sets
  - The (over) use of community repositories such as UCI
  - Concept drift
  - Synthetic, or semisynthetic, data sets

Format

The workshop will consist of invited talks, panel discussion, and presentations. We are planning to have several invited speakers. Some, from outside of our research community, will be able to criticize our accepted practices from an external point of view. Some, from inside our community, will discuss how we could improve on our current practices.

Our invited speakers will be asked to engage each other on the various issues surrounding the problem of evaluation in machine learning at the end of the workshop. The audience will be strongly encouraged to participate in the discussion.

The papers accepted to the workshop will be presented throughout the day between the various invited talks. Papers will be grouped by theme, in order to facilitate discussion at the end of each session.

Attendance

Workshop attendance is open to the public. Priority will be given to those active participants in the workshop (paper authors or speakers).

Submissions

Authors are invited to submit papers on the topics outlined above or other related issues. Both position and technical reports will be considered for this workshop. To promote a lively event, with plenty of discussion, the organizers are very interested in papers that take strong positions on the issues listed above. Workshop papers should not exceed 6 pages using AAAI style. Submissions should be made electronically in PDF or PostScript format and should be sent (no later than April 1, 2007) by e-mail to William Elazmeh at welazmeh@site.uottawa.ca. Resubmissions and position papers (of at least 1 page) are welcome.

Organizing Committee

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Program Committee

Nitesh Chawla (University of Notre Dame, USA), Peter Flach (University of Bristol, UK), Alek Kotcz (Microsoft Research, USA), Nicolas Lachiche (Louis Pasteur University, France), Sylvain Letourneau (National Research Council, Canada), Dragos Margineantu (The Boeing Company, Phantom Works, USA), Stan Matwin (University of Ottawa, Canada), Kiri Wagstaff (NASA Jet Propulsion Laboratory, USA).

Additional Information

For additional information about the workshop please visit the supplemental workshop website.

Explanation-Aware Computing

Explanation has been widely investigated in disciplines such as artificial intelligence, cognitive science, linguistics, philosophy of science, and education. All these disciplines consider varying aspects of "explanation," making it clear that there are many different views of the nature of explanation. Both within AI systems and in interactive systems, the ability to explain reasoning processes and results can have substantial impact. Within the field of knowledge-based systems, explanations have been considered as an important link between humans and machines to increase the confidence of the user in the system's result, by providing evidence of how it was derived. In mixed-initiative problem solving, explanations exchanged between human and software agents may play an important role in communication between humans and software systems. Additional research has focused on how computer systems can themselves use explanations, for example to guide learning. This workshop aims to draw on multiple perspectives on explanation, to examine how explanation can be applied to further the development of robust and dependable systems and to illuminate system processes to increase user acceptance and feeling of control.

Topics

Suggested topics for contributions (not restricted on IT views) include the following:

- Models for explanations
- Integrating application and explanation knowledge
- Explanation-awareness in applications
- Methodologies for developing explanation-aware systems
- Learning to explain
- Context-aware explanation
- Confidence and explanations
- Requirements and needs for explanations to support human understanding
- Explanation of complex, autonomous systems
- Cooperative explanation
- Explanatory aspects of argumentation

Submissions

Workshop submissions will be electronic, in PDF format only, using a submission system on the workshop website. Papers must be written in English and not exceed 5 pages in AAAI style. Submissions are due no later than April 2, 2007. At least one author of each accepted paper must register for the workshop and present the contribution in order to be published in the workshop proceedings.

Those who would like to participate providing a live system demonstration should submit a proposal. A separate call for demos will be posted for details at the supplemental workshop website. Those who want to participate without a paper or demo submission should submit a brief synopsis of their relevant work.

Attendance

Attendance will be limited to active participants only.

Organizing Committee

Thomas Roth-Berghofer (TU Kaiserslautern) (trb@dfki.uni-kl.de); Stefan Schulz (The e-Spirit Company GmbH) (schulz@e-spirit.de); David B. Leake (Indiana University) (leake@cs.indiana.edu); Daniel Bahls (DFKI GmbH) (bahls@dfki.uni-kl.de)

Additional Information

For additional information about the workshop please visit the supplemental workshop website.

Human Implications of Human-Robot Interaction

Autonomous humanoid robots have begun to display levels of human-like behavior and appearance that call for responsible attention to important psychological, sociological, philosophical, and spiritual implications of human-robot interaction (HRI). As ongoing commercial development of these robots makes human-robot interaction increasingly common, representatives of human culture even beyond the technical community need to engage HRI phenomena and seek clearer understanding of their potentially significant effects upon people. Moreover, artificial intelligence is maturing in ways that oblige its own technical community to examine the effects of HRI upon other components of human culture. It is plausible, for example, to anticipate that cumulative HRI experiences may produce novel and fundamental changes of the following kinds: altered concepts of human identity, human consciousness, human freedom, human society, human moral status, human moral responsibility, and human uniqueness.

Accordingly, this AAAI-07 workshop invites paper presentations and discussion of the foregoing kinds of potential changes among members of the artificial intelligence (AI) community, as well as participation and contributions from representatives of other areas such as psychology, sociology, philosophy, and theology. The basic objective of this workshop is to cultivate dialogue that will improve awareness and understanding of specifically human implications of HRI. The fact that this topic area has become timely and important makes it a worthwhile part of the Twenty-Second AAAI Conference on Artificial Intelligence (AAAI-07).

Format

Presentation of papers to an audience of 25–75 attendees at AAAI-07 in Vancouver 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, and some also are expected to be accepted as poster papers.

Submissions

Papers must be 5–7 pages in length, written in (or translated into) English, and submitted as attached Microsoft Word or PDF documents, in MLA style format, using "Submit Papers Here," under "AAAI-07 Workshop" on the GOOD STAR website. Accepted papers must be submitted in AAAI style.

Organizing Committee

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Intelligent Techniques for Web Personalization

Web personalization aims at providing individual users or user groups with a web experience that is specifically tailored to them. To achieve effective personalization, a variety of types of data must be harnessed, including the 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 fifth 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, and ontologies.

Submissions

All submissions must be made electronically to workshop organizers. Please use AAAI style. 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 attend the workshop. (All attendees must register.)

Attendance

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

Organizing Committee

Bamshad Mobasher (DePaul University, USA) (mobasher@cs.depaul.edu); Sarabjot Singh Anand (University of Warwick, UK) (S.S.Anand@warwick.ac.uk); Alfred Kobsa (University of California, Irvine, USA) (kobsa@uci.edu)

Mobile Robots

The mobile robot workshop is an extension of the AAAI-07 robot program centered around the theme of "cultivating robotics through practice." Participants from the robot competition and exhibition will present highlights of their work at the workshop. Summarized below, the robot program includes an exhibition and three different challenges: semantic robot vision, human-robot interaction, and robot integration. Additionally, robotics paper contributors to AAAI will be encouraged to participate in the workshop to present technical specifics regarding implementation of their work. Specific rules and guidelines for the challenges and exhibitions will be posted to the robot program site.

In the semantic robot vision challenge, robots are given a listing of objects that they must locate and recognize. This competition attempts to push the state of the art of semantic image understanding by requiring that robots make use of the wealth of unstructured image data that exists on the Internet today.

The human-robot interaction challenge will involve interacting with conference attendees to achieve a particular task in an unstructured environment. The goal is to entertain attendees using robots and to provide AI and robotics researchers a refreshing venue for demonstrating AI techniques for interactive, entertainment, and social robots.

The goal of the integration challenge is to integrate various existing algorithms and architectural components that have been developed independently within one architecture to produce a working system on a mobile robot that is robust, fault-tolerant, flexible, and easily adaptable to new tasks.

The mission of the robot exhibition is to demonstrate robotics research in a less structured environment than the competition challenges. In addition to research, exhibits that demonstrate how robotics can be used to enhance education in AI and other related courses are highly encouraged.

Format

This workshop will be broken into hour-long sessions with four ten-minute presentations and a twenty-minute discussion and poster session. These sessions will be organized by challenge and then by relevant subfield to encourage discourse on the set of talks. Each presentation should include a very brief overview of the robot architecture, connections to larger research problems, key results, and lessons learned.

Attendance

Teams who receive travel support must attend and present at the workshop. All other participants and conferences attendees presenting robotics-related research are strongly encouraged to attend and present. Others interested in attending should contact the workshop chair.

Submissions

Teams should submit a two-page conference abstract describing their work. Abstracts are reviewed by the cochairs and, if accepted, they will appear in the proceedings of the AAAI conference. A paper will be required within one month after the end of the workshop and will be published in the workshop technical report. Submit abstracts to forbes@cs.duke.edu and paul@cbis.ece.drexel.edu.

Workshop Chair

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Organizing Committee

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Additional Information

For additional information about the workshop please visit the supplemental workshop website (palantir.swarthmore.edu/aaai07).

Plan, Activity, and Intent Recognition

Plan recognition, activity recognition, and intent recognition all involve making inferences about other actors from observations of their behavior, i.e., their interaction with the environment and with each other. The observed actors may be software agents, robots, or humans. This synergistic area of research combines and unifies techniques from user modeling, machine vision, intelligent user interfaces, human/computer interaction, autonomous and multiagent systems, natural language understanding, and machine learning. It plays a crucial role in a wide variety of applications including the following:

- Assistive technology
- Software assistants
- Computer and network security
- Behavior recognition
- Observation-based coordination in robots and software agents
- e-commerce and collaborative filtering

This widespread diversity of applications and disciplines, while producing a wealth of ideas and results, has unfortunately contributed to fragmentation in the field, as researchers publish relevant results in a wide spectrum of journals and conferences.

This workshop seeks to bring together researchers and practitioners from diverse backgrounds, to share in ideas and recent results. It will aim to identify important research directions and identify opportunities for synthesis and unification.

Topics

Contributions are sought in the following areas of research:

- Plan, activity, intent, or behavior recognition
- Adversarial planning, opponent modeling
- Modeling multiple agents, modeling teams
- User modeling on the web and in intelligent user interfaces
- Acquaintance models
- Plan recognition and user modeling in marketplaces and e-commerce
- Intelligent tutoring systems (ITS)
- Machine learning for plan recognition and user modeling
- Personal software assistants
- Social network learning and analysis
- Monitoring agent conversations (overhearing)
- Observation-based coordination and collaboration (teamwork)
- Multi-agent plan recognition
- Observation-based failure detection
- Uncertainty reasoning for plan recognition
- Representations for agent modelling
- Modelling social interactions
- Inferring emotional states
- Programming by demonstration
- Imitation

Due to the diversity of disciplines engaging in this area, related contributions in other fields are also welcome.

Format

The workshop will consist of a series of research presentations, organized into topical sessions (topics to be decided based on submissions). An interdisciplinary panel is planned, seeking to highlight research contributions and challenges unifying and differentiating the different subareas.

Submissions

We welcome submissions describing either relevant work or proposals for discussion topics that will be of interest to the workshop. Submissions are accepted in PDF format only, in AAAI style. Submissions must be no longer than eight pages in length, including references and figures. Please e-mail submissions to cgeib@inf.ed.ac.uk

Organizing Committee

Christopher Geib, Cochair, University of Edinburgh (cgeib@inf.ed.ac.uk) and David Pynadath, ISI, Cochair (pynadath@isi.edu)

Preference Handling for Artificial Intelligence

Preferences guide human decision making from early childhood (for example, "which ice cream flavor do you prefer?") to complex professional and organizational decisions (for example, "which investment funds to choose?"). Preferences are essential for making intelligent choices in complex situations, for mastering large sets of alternatives, and for coordinating a multitude of decisions. Explicit preference models allow an agent to reason about its own and the other agent's behavior and to analyze and revise this behavior.

AI tasks often need new forms of preference handling beyond classic utility-based models. Recent work on preference handling in AI has consequently elaborated many new preference representation formalisms, as reflected by the publications at previous workshops on preference handling at AI conferences.

This workshop not only continues these innovations, but brings the results back to AI problems and explores the promise of preferences for AI challenges. It seeks to increase the scope of preference handling in AI and to attract researchers from all subfields of AI to discuss potential or existing AI applications of explicit preference models.

Topics

The workshop investigates the new reasoning and problem solving capabilities of explicit preference models for all relevant subfields of AI, including multiagent systems, planning and robotics, vision and perception, natural language processing, knowledge representation and reasoning, constraint satisfaction and search, cognitive modeling and human interaction, and for AI-related fields such as social choice and consensus methods. Of particular interest are new emerging questions, for example the role of preferences for coordinating choices in multiple simultaneous tasks such as perception, reasoning, and action. Finding consensus among votes is another important topic arising in multiagent systems, data mining, and ontology formation (such as phylogenetic trees).

Format

The workshop will consist of technical sessions including paper presentations and general (panel) dicussions of the potential of preferences for AI.

Attendance

AI researchers interested in preference handling and their AI applications may submit a paper or a send a statement of interest in participation to the workshop chair.

Submissions

We solicit electronic submissions of papers (5-8 pages in PDF, formatted in AAAI style) by e-mail to:

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Organizing Committee

Jon Doyle (North Carolina State University) (Jon_Doyle@ncsu.edu), Judy Goldsmith (University of Kentucky) (goldsmi t@cs.uky.edu), Ulrich Junker (ILOG) (ujunker@ilog.fr), Jerome Lang (IRIT) (lang@irit.fr).

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Additional Information

For additional information about the workshop please visit the supplemental workshop website (wikix.ilog.fr/wiki/bin/view/PreferenceWS/AiPref07).

In e-commerce environments, recommender systems are software applications that aim at supporting the online user in the decision-making and buying process. The main tasks of such a system typically include the elicitation of user preferences, the construction or update of the user model, hence the generation of a personalized buying proposal, or the provision of other types of information, which can be useful for the customer's decision-making process.

Today, with the increasing number of e-commerce environments on the Web, the demand for new approaches to intelligent product recommendation is higher than ever: There are more online users searching for information and purchasing items over the online channel. In fact there are more online channels, where in addition to he classical web, mobile devices are becoming more and more important. But, there are also more vendors, there are more products, and finally, the products and services offered on the online channels are becoming increasingly complex.

Topics

The workshop will focus on new challenges in the area and the special themes of the workshop will include the following:

- Interactivity in conversational recommender systems, human computer interaction, preference elicitation issues, as well as natural language interaction and explanations
- Content-, knowledge-based, and hybrid approaches as well as knowledge acquisition strategies, self-adapting and learning systems
- Adaptive user interfaces, mobile applications, and personalization techniques
- Consumer behavior models, security and trust, psychological and sociological aspects
- Contextual and task-matched recommender interfaces and algorithms that move beyond a simple profile of user preferences to address the context and motivation behind user requests
- Evaluation approaches for recommender systems, practical applications, and case studies.

Submissions on collaborative approaches to recommendation, case studies, and experience reports, as well as research papers from related fields and disciplines (like human computer interaction, adaptive user interfaces, or decision support systems, or marketing and consumer behavior) with a strong link to recommender systems are welcome as well.

Format

The workshop will comprise several focused paper sessions, scheduled in a way, which allows for ample time for discussion. The workshop will be opened with a 45-minute invited talk and end with a discussion about the grand challenges and the future research agenda in the field.

Submissions

We invite the submission of the following

- Technical papers describing original research of up to 8 pages (in AAAI style), which will be presented at the workshop.
- Position papers of up to 2 pages to introduce attendees to the workshop audience. These papers should identify areas of current interest.
- Demonstration summaries of up to 2 pages that provide an overview of and references to a demonstration to be presented live during the workshop.

All accepted submissions will appear in the workshop technical report and will be made available to attendees in advance of the workshop. Contributions should be prepared in PDF format and should be sent by e-mail to Dietmar Jannach (dietmar.jannach@uni-klu.ac.at).

Organizing Committee

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Gediminas Adomavicius (University of Minnesota), Robin Burke (DePaul University, Chicago), Joseph A. Konstan (University of Minnesota), Francesco Ricci (Free University of Bozen-Bolzano), Alexander Tuzhilin (New York University

Additional Information

For additional information about the workshop please visit the supplemental workshop website (forwarding-iwas.uni-klu.ac.at/AAAI07-WS-Recommender-Systems).

Semantic e-Science

As semantic technology has been gaining momentum in various e-Science areas (for example, W3C's new working group for semantic web and life science), it is important to offer semantic-based methodologies, tools, middleware to facilitate scientific knowledge modeling, logical-based hypothesis checking, semantic data integration and application composition, integrated knowledge discovery and data analyzing for different e-Science applications.

However, such a research area does not yet exist in a coherent form. As a new branch of artificial intelligence, semantic web researchers have largely focused on formal aspects of logic languages or general-purpose semantic application development, with less consideration of requirements from specific scientific areas. On the other hand, general science researchers are growing ever more dependent on the web, but they have no coherent agenda for exploring the emerging trends on the semantic web technologies. It urgently requires the development of a multidisciplinary field to foster the growth and development of e-Science applications based on the semantic technologies and related knowledge-based approaches. Following the success of SeS2006, this workshop aims to provide an interdisciplinary forum for researchers from both artificial intelligence including the semantic technology, and general science communities including the life science community.

Topics

- Semantic e-science foundations:
  - Knowledge representation for e-science
  - Ontology engineering for e-science
  - Knowledge integration for e-science
  - Knowledge management for e-science
  - Semantic data integration for e-science
  - Semantic web services for e-science
  - Complex e-science process management
  - Complex semantic network
- Semantic e-Science applications:
  - Semantic web for life science, and bio-med-informatics
  - Semantic web for system and integrated biology
  - Semantic web for translational medicine
  - Complex biological semantic network.
  - Semantic web for geography, environment and climate
  - Semantic web for chemistry, physics, and mechanics
  - Semantic web and digital libraries and scientific publication

Submissions

We invite academic and industrial researchers and practitioners to submit original research papers, well-written surveys, or papers describing deployed systems to the workshop. The papers must not exceed 8 pages in length including references and should be prepared in AAAI style. The papers should be submitted using the submission system on the workshop website. Each paper will be reviewed by at least 2 members of the program committee.

Organizing Committee

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Additional Information

For additional information about the workshop please visit the supplemental workshop website (neuroweb.med.yale.edu/ses2007).

Spatial and Temporal Reasoning

The Spatial and Temporal Reasoning 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 spatio-temporal 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.

Format

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.

Attendance

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 style 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

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Additional Information

For additional information about the workshop, please visit the supplemental workshop website (cs.auckland.ac.nz/~hans/spacetime/aaai07strws).

Trading Agent Design and Analysis

Trading 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.

This workshop will be held in conjunction with the 2007 Trading Agent Competition (TAC-07), with finals held during AAAI-07, but paper submissions need not be directly related to TAC. In fact, we encourage submissions related to other trading scenarios.

Format

The workshop will be held Monday, July 23, 2007. 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-07 competition. Attendance at the workshop will be limited to about 75.

Submissions

Papers should be about 8 two-column pages. Manuscripts must be in English, in either PostScript or PDF format. Papers must be formatted in AAAI style. Submissions should be sent by e-mail to jcollins@cs.umn.edu.

Workshop Chair

John Collins
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Program Committee

Ken Brown (University College Cork), Maria Fasli (Essex University), Shaheen Fatima (University of Liverpool), Enrico Gerding (University of Southampton), Amy Greenwald (Brown University), Sverker Janson (Swedish Institute of Computer Science), Wolfgang Ketter (Erasmus University Rotterdam), Kate Larson (University of Waterloo), 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), Alex Rogers (University of Southampton), Jeffrey Rosenschein (Hebrew University of Jerusalem), Norman Sadeh (Carnegie Mellon University), 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 about the workshop and previous TADA workshops, please visit the supplemental workshop website (tac.cs.umn.edu/tada07).

Information Integration on the Web

The Sixth International Workshop on Information Integration on the Web (IIWeb-07) will focus on the topic of effectively integrating information from structured sources with that available in relevant unstructured sources. Specifically, we will provide a platform to discuss research directions, share experience and insights from both academia and industry. The anticipated outcome of the workshop is to assess the state of the art in the area, as well as to identify critical next steps to pursue in this topic. As information integration is interdisciplinary in nature, its researchers have spanned the related areas of data mining, machine learning, databases, information retrieval, semantic web, web services, and others.

We invite researchers working in areas related to Web-based information integration to participate. The topics of interest include, but are not limited to the following:

- Novel integration architectures
- Source discovery and deep-web crawling
- Automatic wrapper induction and Schema matching
- Web entity extraction, Record linkage and object consolidation, Named entity extraction
- Source descriptions and meta-data learning
- Web based query execution and optimization
- DB & IR integration
- Data mining for integration
- Applications

Format

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

Submission Guidelines

We welcome original, unpublished manuscripts (4–6 pages) inclusive of all references and figures. Vision papers and descriptions of work-in-progress are welcomed as short paper submissions (1–3 pages). Papers must be written in English, and formatted according to AAAI proceeding formats. Please submit papers in PDF and send them to the cochairs via email at ubnambiar@in.ibm.com and znie@microsoft.com.

Organizing Committee

Cochairs: Ullas Nambiar (IBM India Research Lab) and Zaiqing Nie (Microsoft Research Asia). Alon Halevy (Google Inc., USA) (halevy@google.com), Kevin Chang (University of Illinois at Urbana-Champaign) (kcchang@cs.uiuc.edu), Subbarao Kambhampati (Arizona State University) (rao@asu.edu)

Program Committee

Avigdor Gal, Andrew McCallum, Biplav Srivastava, Craig Knoblock, Chen Li, Felix Naumann, Ganesh Ramakrishnan, Gautam Das, Hasan Davulcu, Ji-Rong Wen, Kamal Karlapalem, Louiqa Raschid, Michael Cafarella, Misha Bilenko, Nicholas Kushmerick, Steven Minton, William Cohen

Additional Information

For additional information about the workshop please visit the supplemental workshop website (research.microsoft.com/users/znie/iiweb07/).