

AAAI 1997 Spring Symposium Series

March 24 - 26, 1997

Stanford University, California

Call for Participation

Sponsored by the

American Association for Artificial Intelligence
445 Burgess Drive, Menlo Park, CA 94025-3442
(415) 328-3123
sss@aaai.org
<http://www.aaai.org/Symposia/symposia.html>

The American Association for Artificial Intelligence presents the 1997 Spring Symposium Series, to be held Monday through Wednesday, March 24-26, 1997, at Stanford University. The topics of the eight symposia are:

- Artificial Intelligence in Knowledge Management
- Computational Models for Mixed Initiative Interaction
- Cross-Language Text and Speech Retrieval
- Intelligent Integration and Use of Text, Image, Video and Audio Corpora
- Memory and Medicine: Using Past Solutions in Medical Problem Solving
- Natural Language Processing for the World Wide Web
- Ontological Engineering
- Qualitative Preferences in Deliberation and Practical Reasoning

Symposia will be limited to between forty and sixty participants. Each participant will be expected to attend a single symposium. Working notes will be prepared and distributed to participants in each symposium.

A general plenary session, in which the highlights of each symposium will be presented, will be held on Tuesday, March 25, and an informal reception will be held on Monday, March 24.

In addition to invited participants, a limited number of other interested parties will be able to register in each symposium on a first-come, first-served basis. Registration information will be available by December 15, 1996. To register, contact:

AAAI
445 Burgess Drive
Menlo Park, CA 94025-3442
(415) 328-3123
(415) 321-4457 (fax)
sss@aaai.org
<http://www.aaai.org/Symposia/Spring/1997/sssregistration-97.html>

Submission Information

Submissions for the symposia are due on October 25, 1996. Notification of acceptance will be given by November 25, 1996. Material to be included in the working notes of the symposium must be received by January 17, 1997. See the appropriate section below for specific submission requirements for each symposium. This document is available as <http://www.aaai.org/Symposia/Spring/1997/sssparticipation-97.html>



Artificial Intelligence in Knowledge Management

Knowledge management (KM) is a topic of growing interest to large organizations. It comprises activities focused on the organization acquiring knowledge from many sources, including its own experience and from that of others, and on the effective application of that knowledge to fulfill the mission of the organization.

The knowledge management community has been eclectic in drawing from many sources for its methodologies and tools. Typical approaches to the management of knowledge are based on concept maps, hypermedia, and object-oriented databases. Techniques developed in artificial intelligence for knowledge acquisition, representation and discovery are seen as relevant to KM. However, there is as yet no unified underlying theory for KM, and the scale of the problem in large organizations is such that most existing AI tools cannot be applied in their current implementations.

The objective of this symposium is to bring together KM practitioners and applied AI specialists from KA, KR and KDD, and attempt to formulate the potential role of various AI sub-disciplines in knowledge management.

Submission Information

Submissions are requested from those with in-depth knowledge and experience in AI topics relevant to knowledge management. Papers and presentations may address such issues as the requirements and foundations for KM, the applicability of existing AI theories, methodologies and tools to KM, the future development of KM in relation to AI, and applications to workflow systems and business process modeling. Of particular interest are requirements analyses from those responsible for the development and implementation of knowledge management systems.

Ongoing information on the symposium will be available through the web at <http://ksi.cpsc.ucalgary.ca/AIKM97/>.

Potential attendees should submit either a paper (not exceeding 5000 words), a summary of an ongoing development or lessons learned, or a statement of interest (not exceeding 1000 words). All submissions should be electronic in PostScript to <ftp://ksi.cpsc.ucalgary.ca/incoming> entitled by the submitter's name with email to gaines@cpsc.ucalgary.ca giving the title, authors, affiliation, and abstract of the submission.

Organizing Committee

Rose Dieng, INRIA, France; Brian R. Gaines (cochair), University of Calgary, Canada; Gertjan van Heijst, Kenniscentrum CIBIT, The Netherlands; Dickson Lukose, University of New England, Australia; Frank Maurer, University of Kaiserslautern, Germany; Mark A. Musen (cochair), Stanford University, USA; Ramasamy Uthurusamy (cochair), General Motors, USA.



Computational Models for Mixed Initiative Interaction

In a mixed initiative interaction, direction and control of the interaction shifts among the participants. Since the information and abilities needed to solve a problem are distributed among the participating agents, a system that is collaborating with other users to solve a problem must have the flexibility to take or relinquish initiative. However, the possibility of shifting initiative requires that computer systems include mechanisms for recognizing when to lead or otherwise take control of an interaction and when to let others take the initiative. In addition, an interactive system must be able to take initiative into account in interpreting utterances and in selecting appropriate responses.

In this symposium, we will address the following issues:

- What knowledge strategies or knowledge representation schemes (e.g. plans, logics, etc.) are appropriate for modeling initiative, such as how control or changes in initiative are manifested in the interaction, or how taking initiative affects how agents will interpret another agent's actions, or how they choose an appropriate response;
- What algorithms or computer systems can be developed for controlling mixed-initiative interaction, such as how to decide when it is appropriate to take or relinquish the initiative and how to alert other participants to the shift, or how to detect when another agent is attempting to alter the control or purpose of the conversation.

Submission Information

Potential participants should submit their name, physical and electronic addresses, fax number, and WWW URL if available. (Collaborating authors should submit separately, but should also name the others in the group.) Participants should also submit a brief statement describing why you wish to attend and how you believe that you can contribute to the symposium, along with a list of related work that you have done, papers you have written or programs you have developed. Note whether you can contribute a demo, a video, a benchmark problem, or a brainstorming exercise. Participants will be required to submit a paper for the working notes, no longer than 8 pages. This may be a research paper, a description of a working system or practical problem domain, or a position paper. Send electronic or hard copy versions of this material to Susan Haller, Computer Science and Engineering Department, University of Wisconsin-Parkside, Kenosha, Wisconsin 53141-2000 USA. Email: haller@cs.uwp.edu. Web: <http://cs.uwp.edu/staff/haller/Activities/sss-97.html>.

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Cross-language Text and Speech Retrieval

With the increasing variety of electronically available speech and text that crosses national boundaries on the global internet and other networks, there is an increasing need for systems capable of providing access to information in multiple languages. This symposium is designed to bring together researchers from the fields of information retrieval, speech processing, computational linguistics, knowledge organization, and machine translation to address the problem of constructing such multilingual systems. The following examples of important issues which could benefit from an interdisciplinary approach are meant to be illustrative, and are not intended to limit contributions to the topics listed: Corpus-based versus knowledge-based approaches, interlingual versus language-specific approaches, achieving broad domain coverage, exploiting complex multilingual knowledge structure, building on related work in related fields, and evaluation.

The symposium will begin with tutorial-style presentations to provide a shared background to all participants. We will then focus on contributions by the participants presenting innovative techniques and ideas and practical applications. Presentations will be followed with commentary by a participant from a different discipline in order to encourage a broad discussion among the participants. In addition, there will be small group discussions designed to allow participants to develop their opinions on important questions in a collaborative environment. There may also be joint sessions with other symposia on issues of common interest.

Submission Information

Potential participants should submit either a short statement of interest or an extended abstract, preferably by electronic mail as an ascii or PostScript file, addressing one or more topics that are important to cross-language text and speech retrieval. Authors of accepted abstracts will be asked to submit a short working paper (two to eight pages) and to prepare either an oral or a poster presentation. Working papers and other materials will be made available on the conference web site. Information regarding the symposium can be found at <http://www.ee.umd.edu/medlab/filter/sss>.

Potential participants in Europe should address submissions to:

David A. Hull (e-mail: hull@xerox.fr). Telephone: (011) 33-76-61-50-74.

Fax: (011) 33-76-61-50-99

Other potential participants should address submissions to:

Douglas W. Oard (e-mail: oard@glue.umd.edu). Telephone: (301) 405-2038.

Fax: (301) 314-9145

Organizing Committee

Eduard Hovy, USC Information Sciences Institute, hovy@isi.edu; David Hull (cochair), Rank Xerox Research Centre, hull@xerox.fr; Doug Oard (cochair), University of Maryland College Park, oard@glue.umd.edu; Peter Schaeuble, ETH Zurich, schaeuble@inf.ethz.ch; Dagobert Soergel, University of Maryland College Park, ds52@umail.umd.edu.



Intelligent Integration and Use of Text, Image, Video and Audio Corpora

It is now possible for sizeable corpora of text, image, video, and audio (TIVA) to be made available for research and applications. In contrast with text processing, however, few effective methods exist for understanding or even searching the content represented by images or video and audio recordings. Intelligent, content-understanding programs can greatly improve the usefulness of these huge quantities of existing material. By collecting and intelligently integrating several of these media sources, opportunities are opened up for novel applications of existing techniques in AI, and for the development of new AI technologies. This symposium is intended to explore current AI research and potential future contributions of AI in making use of TIVA sources.

The symposium is intended to foster exploration of AI techniques for creating intelligent tools for the collection, cataloging, and exploration of mixed TIVA materials; and discussion and presentation of experimental results concerning the simultaneous use of information from text, image, video and audio channels. How can integration of these sources support intelligent behavior and machine learning in ways that would not be possible using any single medium alone?

In particular we want to encourage the exchange of research that crosses the boundaries between vision, speech processing, language processing, knowledge representation, intelligent agent design, and information retrieval, allowing participants to share ideas and effective approaches to the problem of making TIVA sources more accessible and useful both to people and to other intelligent programs. For more information see: <http://www.informedia.cs.cmu.edu/sssaai/>

Submission Information

Potential participants should submit a short but complete paper (two to seven pages) describing approaches to solving problems in the intelligent integration of TIVA sources. We are particularly interested in papers describing how integrated TIVA sources are being used in functioning systems. We encourage the presentation, for discussion, of work-in-progress, especially where such work is supported by empirical or theoretical evidence. PostScript or hardcopy submissions should be submitted to the following address (we may require submission of html versions of accepted papers):

Michael Witbrock or Alex Hauptmann, Carnegie Mellon University
School of Computer Science, 5000 Forbes Avenue, Pittsburgh, PA 15213.
Email: witbrock@cs.cmu.edu or alex@cs.cmu.edu.
Telephone: (412) 268 6247 or (412) 268 1448. Fax: (412) 268 2581

Organizing Committee

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Memory and Medicine: Using Past Solutions in Medical Problem Solving

The fantastic growth of medical technology has created new challenges for managing complex problems. By modeling reasoning as recall of past solutions to similar problems, memory-based techniques offer researchers powerful tools for working in medical domains.

The purpose of the symposium is to provide a common ground for researchers in disparate areas. We welcome submissions ranging from rudimentary theories to descriptions of working applications. Case-based approaches to medicine combine the strengths of several areas. This symposium will provide an eclectic forum for researchers from many different backgrounds to gather and share approaches and ideas. We welcome AI researchers who have applied case-based techniques to domains outside of medicine and are in search of challenging new areas. We also invite researchers who have been working in medical domains and would like to explore the use of new tools and techniques. Finally, we seek the people at the nexus of these two groups: those who are currently using memory-based approaches in medical fields. Through the symposium we will capture the range of research opportunities in this evolving area.

Submission Information

Persons interested in participating should submit either a short statement of interest or an extended abstract, preferably as an ascii or PostScript file addressing either application or research issues related to CBR applications in medicine. Authors of accepted abstracts will be asked to submit a short paper (two to eight pages) and to prepare either an oral or poster presentation. Working papers and other materials will be available at the conference web site. We will have videoconference link with Grenoble, France where a similar mini-symposium will take place during Annual Artificial Intelligence in Medicine Europe 97. This should enable us to discuss our research with colleagues from Europe. Up to date information and materials regarding symposium can be found at <http://radweb.mcg.edu/medinfo/sss>.

Potential participants should address submissions to:

Robert T. Macura, Medical Informatics Section, AE-2018, Medical College of Georgia, Augusta, GA 30912, USA. Telephone: (706) 721-3089.

Fax: (706) 721-2175. Email: rmacura@ai.uga.edu

or

Katia Sycara, The Robotics Institute, Carnegie Mellon University, Pittsburgh, PA 15213, USA. Telephone: (412) 268-8825. Fax: (412) 268-5569.

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Natural Language Processing for the World Wide Web

The World Wide Web (WWW) is rapidly becoming a powerful medium for human communication and dissemination of information. Most information on the WWW is expressed in natural language texts. Yet, most software tools built for the WWW do not apply natural language processing (NLP) techniques for searching, retrieving, presenting, or generating texts.

The field of NLP has the potential to offer better tools that exploit the syntax, semantics, and pragmatics of natural language texts, than current ones based mostly on keyword matching and database indexing methods, for easing the overload of texts on the users. The WWW in turn is an excellent domain to develop practical applications of NLP. Potential applications of NLP include (but are in no way limited to) automatic and interactive summarization and machine translation of WWW documents, information brokering, document filtering, and automatic generation of WWW documents.

This symposium aims to bring together researchers in various subdisciplines of NLP and from the Web community to address applications of NLP for improving the use of the WWW. The symposium will include paper presentations, on-line demonstrations, commentaries, working groups, and a panel discussion. The WWW will be used extensively before, during, and after the symposium. Additional information about the symposium is available at <http://crl.nmsu.edu/users/mahesh/aaai-web-nlp-symposium.html>

Submission Information

We invite papers describing concrete applications of NLP techniques for the WWW as well as position papers concerning what NLP can and cannot do for the WWW or what should NLP as a field do in order to meet the challenges and opportunities provided by the WWW. *We strongly encourage on-line demonstrations of working NLP applications on the WWW.* We also invite submissions that treat WWW documents as natural language texts (i.e., with NL syntax and semantics, as opposed to just strings or databases). Papers addressing NLP problems characteristic of the WWW, such as hypertext, multilingual, and multimedia documents, are especially encouraged.

Papers should be up to 10 pages (11 point minimum) including an abstract, and indicating whether it is a position or an application paper. Electronic submission (by e-mail to mahesh@crl.nmsu.edu or by <ftp://crl.nmsu.edu/incoming/>) is strongly encouraged. Hardcopy submissions (5 copies) may be sent to: Kavi Mahesh, Computing Research Laboratory, Box 30001, Dept. 3CRL, Room 292B, New Science Hall, New Mexico State University, Las Cruces, NM 88003-0001, (505) 646-5861.

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Ontological Engineering

The last few years have seen a growing interest in the design, use, and sharing of ontologies. Work in this area naturally incorporates formal knowledge representation with practical implemented systems. This symposium will contribute to the continuum of current research by focusing on the practical aspects of ontology development and use including tools, methodologies, and engineering practice. This is a symposium rather than a mini-conference. We solicit papers, but at the symposium itself the emphasis will be on sharing experiences with time for all participants to contribute to the discussion.

This symposium will focus on practical experience in the design and construction of ontologies in a variety of different domains. Domains of interest include, but are not restricted to: medicine, natural language, materials science and engineering, and enterprise modeling (including process, product, and organization modeling). The goals of the symposium will be to achieve greater understanding of the following issues: What are the roles that implemented ontologies play? Do they support automated reasoning and problem-solving? Are they used as an interlingua to achieve interoperability, reuse, or sharing? Are they used merely to ensure communication of a shared understanding between people? What methodologies can we use to design and evaluate ontologies? Will these methodologies differ according to the different intended uses? How can tools best provide assistance for the design and implementation of ontologies? To what extent are the ontologies designed in different domains shareable and reusable? How can we structure ontologies to support sharing and reuse? Do we require a suite of generic ontologies to support the more domain-specific ones? If so, what are these generic ontologies? How can they be related to existing standards? What are the obstacles to the integration of different ontologies? What lessons have people learned from the implementation of their ontologies?

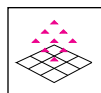
Submission Information

Persons interested in participating should submit either a technical paper (up to 12 pages, excluding bibliography), or a position paper addressing the issues above. Authors will be notified of acceptance via email. Additional information will be posted at: <http://www-ksl.stanford.edu/projects/htw/sss97/>. Submit electronically, or send three hard copies of your submission to:

1997 Spring Symposium on Ontological Engineering
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Stanford, CA 94305, USA. Telephone: (415) 723-9770. Fax: (415) 725-5850.
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Qualitative Preferences in Deliberation and Practical Reasoning

Decision theory and related theories in economics concentrate on a notion of expected utility that is representable using quantitative preferences and probabilities. More recent traditions in artificial intelligence have explored qualitative decision methods including control rules, rule orderings, default preferences, and qualitative approaches to probability.

This recent work raises issues such as the following: Should desirability of actions be decomposed into separate notions of worth and likelihood? Can or should we dispense with optimality? How can classical decision theory be replaced with a genuine theory of bounded rationality? Are there legitimate approaches to utility that are not representable in quantitative terms?

This symposium seeks to provide a forum for research on issues such as these. Its primary focus will be the meaning, representation, and use of qualitative preference information in decision making and reasoning. The purely probabilistic issues which have received much attention in their own right will be addressed in this symposium only insofar as they contribute to the study of qualitative utilities.

Submission Information

Potential participants are invited to submit abstracts and/or statements of interest. The abstract should be no longer than 2400 words and should describe original research in the area of the symposium. The statement of interest should also be no longer than 2400 words (and may be brief if an abstract is also submitted). It should mention the participant's background and interest in the area; the statement may also include a pointer to a web page with further relevant information. Applicants are also invited to propose topics for panels that would be appropriate for the symposium. The symposium committee will select abstracted papers for inclusion in the symposium working papers. Some papers will be selected for oral presentation in the symposium, but applicants may in some cases be asked to participate in some other way. Submissions will only be accepted in ascii or PostScript, only, to doyle@mit.edu and thomason@isp.pitt.edu.

For further information, please contact the organizing committee at qdt-pc@medg.lcs.mit.edu, or consult the web page for the symposium at <http://www.kr.org/qdt>.

Organizing Committee

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