



## 1999 Fall Symposium Series

November 5-7, 1999

Sea Crest Conference Center on Cape Cod  
North Falmouth, Massachusetts

## Call for Participation

*Sponsored by the*  
American Association for Artificial Intelligence  
445 Burgess Drive  
Menlo Park, CA 94025  
650-328-3123  
650-21-4457 (Fax)  
fss@aaai.org  
[www.aaai.org/Symposia/](http://www.aaai.org/Symposia/)

The American Association for Artificial Intelligence is pleased to present its 1999 Fall Symposium Series, to be held Friday through Sunday, November 5-7, 1999 at the Sea Crest Resort & Conference Center in North Falmouth, Massachusetts. The topics of the five symposia in the 1999 Fall Symposium Series are:

- Modal and Temporal Logics Based Planning for Open Networked Multimedia Systems
- Narrative Intelligence
- Psychological Models of Communication in Collaborative Systems
- Question Answering Systems
- Using Layout for the Generation, Understanding or Retrieval of Documents

An informal reception will be held on Friday, November 5. A general plenary session, in which the highlights of each symposium will be presented, will be held on Saturday, November 6. 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. In addition to invited participants, a limited number of interested parties will be able to register in each symposium on a first-come, first-served basis. Registration information will be available in early July. To obtain registration information, write to:

AAAI Fall Symposium Series  
445 Burgess Drive  
Menlo Park, CA 94025-3442  
Voice: 650-328-3123  
Fax: 650-321-4457  
fss@aaai.org  
[www.aaai.org/Symposia/symposia.html](http://www.aaai.org/Symposia/symposia.html)

#### Submission Dates

- Submissions for the symposia are due March 31, 1999
- Notification of acceptance will be given by May 7, 1999
- Material to be included in the working notes of the symposium must be received by August 27, 1999.

*See descriptions for specific submission requirements.*

Intelligent and interactive multimedia applications present new challenges to distributed systems. There's a need for

# Modal and Temporal Logics Based Planning for Open Networked Multimedia Systems

adaptive communication structures with dynamic provision of quality of services and management; a need for an information model of design centered around user needs and participation, with deeper conception of interaction; and a need to tailor systems to existing practice, to support temporal adaptation and evolution, to accommodate differences in individual styles, organizational roles, and work processes. To meet these challenges, interactive multimedia systems should possess and utilize knowledge about the application domain, user requirements tasks, the context of interaction, the content of stored information, communication and performance parameters. The design of interactive multimedia applications must move away from a view of fixed "black-box" systems, which could be objectively studied and assessed, towards a new view of reflective "systems-in-use," which acknowledges the influence of these elements.

Modal and temporal logics are suitable as the basis of reflective architectures for knowledge-based, multi-agent systems. In AI, they are used to reason about time, action, and adaptive change in systems with components that contain different and dynamic knowledge theories. In classical computer science, they are used for the programming and verification of computer programs, especially those concerned with imperative and reactive behavior. In this symposium we are interested in both approaches, aiming to support reflective, reactive,

adaptive, reliable, distributed, multimedia systems and future generation of active networks.

The main objective of the symposium is to provide a forum for researchers involved in the design and development of networked multimedia systems and in the application of modal/temporal topics to adaptive/reactive systems to identify common ground, relevant experiences, applications, open problems and possible future developments and standardization.

## Submissions

Submissions related to these topics (not exceeding 10 pages) describing completed work, work in progress and proposals for panel discussion are solicited. They should contain author names and addresses, an abstract and keywords. They should be sent electronically to ([daoud@cs.toronto.edu](mailto:daoud@cs.toronto.edu)) in PDF or PostScript format attached to e-mail. For further information see [www.cs.toronto.edu/DCS/events.html](http://www.cs.toronto.edu/DCS/events.html)

## Organizing Committee

Fawzi Daoud, University of Toronto (Chair); Elisabeth Andre, DFKI GmbH; Lynne Blair, Lancaster University; Glenn Bruns, Bell Labs; Enrico Franconi, University of Manchester; Henry Kautz, AT&T Labs; Luciano Serafini, IRST; Hideaki Takeda, NAIST

# Narrative Intelligence

While narrative has long been a theme in AI, it has recently experienced a surge of popularity. Researchers in various subfields, including story generation and understanding, agent architecture, and interface agents, have taken independent forays into narrative, finding it a fruitful way to rethink some basic issues in AI. Strands of work in narrative intelligence (NI) include the following:

*Models of human narrative cognition:* Since narrative is an important part of the way humans understand the world and each other, some researchers are looking at ways in which artificial agents can have similar narrative capabilities.

*Architectures for generating narratively understandable behavior:* Some researchers are building story-telling systems, autonomous agents, and interface agents which can generate narratively structured behavior.

*Meta-studies of narrative as part of AI research:* AI researchers, being human, themselves use narrative to understand their own work. An understanding of this narrative process can improve the quality and social applicability of AI technology.

Researchers in NI have drawn from many research traditions, including art, literary theory, (narrative) psychology, and cultural studies. The goal for our symposium is to bring researchers from these disparate perspectives together to talk about what we have learned about narrative and its potential for AI.

## Symposium Scope and Questions

Within AI, this symposium solicits work from, but not limited to story understanding; story generation; narrative structure in interface design; narrative structure in the design of autonomous agents; believable agents (insofar as they participate in narrative structure); and interactive story-telling.

In addition, because NI researchers have drawn deep inspiration from concepts of narrative from other disciplines, we hope to broaden and solidify our understanding of narrative by including several participants from other research traditions, including narrative psychology, narrative theory, art, and cultural studies. More information about this symposium can be found at [www.cs.cmu.edu/~michaelm/narrative.html](http://www.cs.cmu.edu/~michaelm/narrative.html).

## Submission Information

Potential participants should submit a short paper (3 to 5 pages) describing their work in this area. The paper should make clear which approaches to narrative are being drawn on and how they apply to AI. All submissions should be sent via electronic mail, in plain ASCII format, to Michael Mateas at [michaelm@cs.cmu.edu](mailto:michaelm@cs.cmu.edu).

## Organizing Committee

Kerstin Dautenhahn, University of Reading; Clark Elliott, DePaul University; James Lester, North Carolina State University; Michael Mateas (cochair), Carnegie Mellon University; Chrystopher Nehaniv, University of Hertfordshire; Phoebe Sengers (cochair), ZKM Karlsruhe

# Psychological Models of Communication in Collaborative Systems

Many collaborative systems embody ideas drawn piecemeal from researchers' intuitions about collaboration. Alternatively, collaborative systems may benefit from a more theoretical approach informed by the psychology of communication. Psychological theories and principles (e.g., those of Herbert Clark and colleagues) address many of the same issues that are crucial to the functioning of collaborative systems and agents. Some systems and agents have been designed taking such psychological principles explicitly into account, often adapting and extending the principles. Other systems designed without an explicit psychological theory in mind nevertheless have psychological claims implicit in their function and design choices.

This interdisciplinary symposium will focus on the use and applicability of psychological models of communication in computer systems that function either as a collaborative partner with a human user or as a mediator between collaborating people. A main thread of the symposium will be to investigate the extent to which specific psychological theories yield useful models for dialogues "with and through computers." Such models may provide architectures for integrating the actions of two or more agents into a coherent whole, methods for interpreting or generating interactive behavior, and theoretical frameworks for coding, understanding, predicting, or evaluating dialogues. Submissions are invited on

topics such as explicitly incorporating psychological models of language use into interactive dialog systems or agents; using psychological models of dialog to predict the form and structure of human-computer; dialog or to evaluate dialog strategies; applying psychological models to systems that enable multi-modal human communication; evaluating the suitability of particular psychological models for AI systems; identifying and evaluating explicit or implicit psychological claims made by influential models of intelligent interactive behavior.

## Submissions

Potential participants should submit (1) three questions for discussion, (2) a position paper or project report of *no more than* 10 pages, and (3) if appropriate, pointers to other relevant work available on-line. Electronic submission is preferred. E-mail attachments to [susan.brennan@sunysb.edu](mailto:susan.brennan@sunysb.edu) or send hard copy to Susan Brennan, Department of Psychology, SUNY, Stony Brook, NY, USA 11794-2500. For details, see [www.inria.fr/acacia/PM](http://www.inria.fr/acacia/PM) (Europe) or [www.cs.umd.edu/~traum/PM/](http://www.cs.umd.edu/~traum/PM/) (USA).

## Organizing Committee

Susan E. Brennan (Co-chair), SUNY Stony Brook; Alain Giboin (Co-chair), INRIA; David Traum (Co-chair), University of Maryland; Johanna Moore, University of Edinburgh; David G. Novick, EURISCO; Michael F. Schober, New School for Social Research; Steve Whittaker, AT&T.

# Question Answering Systems

Since the days of “Turing test,” “question answering” (QA) has been a powerful paradigm in AI. Although AI has diversified much beyond the notion of intelligent behavior proposed in the Turing test, QA remains a fundamental capability needed by a large class of systems. It is a powerful methodological tool to structure a task and specify its scope using a question grammar. The QA paradigm may not be necessarily associated with intelligent behavior. For example, QA has an interesting parallel to query processing in database systems which command a strong foothold in the commercial world. QA, however, goes much beyond what can be achieved using database systems. For example, many analytical tasks that involve gathering, correlating and analyzing information can naturally be formulated as QA problems. With the recent explosion of information available on the world wide web, QA is a compelling framework for finding information that closely matches user needs.

This symposium is aimed at bringing together diverse techniques from AI (more specifically knowledge representation and reasoning) and database systems (more specifically query processing) that can be used to build QA systems. The following topics are of interest in this context: Methods to rapidly construct the knowledge base (KB) of a QA system; techniques to construct a KB by reuse and reformulation; existing knowledge repositories; techniques for interfacing inference techniques with

database systems; using information from external knowledge sources in QA; measuring competence of a QA system; answer summarization and explanation; techniques for evaluating and benchmarking QA systems; and implemented QA systems.

## Submissions

Potential participants should submit a paper or extended abstract not to exceed 6,000 words describing work in progress, completed work, positions, comparisons, test beds, tutorials, discussion topics, or potential panels. Participation from commercial vendors is especially welcome. Submissions via e-mail (standard PostScript, compressed and uuencoded) are strongly recommended.

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For technical information about the symposium please contact Vinay Chaudhri or Richard Fikes.

## Organizing Committee

Vinay K. Chaudhri (cochair), SRI International; Paul Cohen, University of Massachusetts at Amherst; Richard Fikes (cochair), Stanford University; Michael Franklin, University of Maryland at College Park; Boris Katz, Massachusetts Institute of Technology; Bart Selman, Cornell University

# Using Layout for the Generation, Understanding or Retrieval of Documents

Layout clearly plays a role in text comprehension and, concomitantly, in the way in which text ought to be generated. It also contributes to the identification of classes of documents (e.g., business letters versus journal articles versus user manuals), parts of documents (e.g., the sports pages versus the classified advertisements of a newspaper) and types of information contained in a document (e.g., subsidiary information in footnotes versus primary information in titles; paragraph breaks as topic breaks). Nevertheless, the issue of layout has been largely ignored in computational linguistics and information retrieval: few, if any, natural language generation systems produce (except in the most rudimentary way) laid-out text; probably no natural language understanding system includes layout as an input feature; possibly no information retrieval or information extraction system makes more than cursory use of layout. Furthermore, of the growing corpora of on-line texts, none to our knowledge makes more than a passing stab at including the layout of their source documents.

The rapidly expanding use of SGML and HTML in source documents is, however, now making layout a much more accessible feature for study and for computational treatment than it has been previously, and therefore increasingly available for use in natural language processing and information retrieval.

The symposium will provide a discussion forum for emerging work on

the following issues: the parameters of layout; the interactions between layout and information structure; discourse structure; document structure; genre; grammaticality; punctuation; referring expressions; linguistic style; the influence of layout on text comprehension; corpus annotation schemes for document layout; integrating text and graphics in documents; and implementation issues (e.g., treatment of local versus global layout features; relation between layout realization and syntactic realization).

## Submissions

We invite applications for participation in one of two formats: An extended abstract of up to 5 pages describing completed work or work-in-progress; or a statement of 1 page describing your interest in this area and including, where possible, any relevant publications. Submissions should be made electronically in one of the following forms: ASCII, PostScript, self-contained LaTeX, HTML, or RTF. They are to be sent to [layout-symposium@itri.bton.ac.uk](mailto:layout-symposium@itri.bton.ac.uk).

## Organizing Committee

John Carroll, University of Sussex; Robert Dale, Microsoft Research Institute; Winfried Graf, Kienbaum Management Consultants GmbH; Matthew Hurst, University of Edinburgh; Geoff Nunberg, Xerox PARC; Richard Power (cochair), University of Brighton; Donia Scott (cochair), University of Brighton; Karen Sparck Jones, Cambridge University

