

Revised Call for Participation and Call for Papers

# The Fifteenth National Conference on Artificial Intelligence—AAAI-98

Sponsored by AAAI • Madison, Wisconsin • July 26–30, 1998

AAAI-98 is the Fifteenth National Conference on Artificial Intelligence (AI). The purpose of the conference is to promote research in AI and scientific interchange among AI researchers and practitioners. Papers may represent significant contributions to any aspects of AI:

- Principles underlying cognition, perception, and action
- Design, application, and evaluation of AI algorithms and systems
- Architectures and frameworks for classes of AI systems
- Analysis of tasks and domains in which intelligent systems perform.

One of the most important functions served by the national conference is to provide a forum for information exchange and interaction among researchers working in different subdisciplines, in different research paradigms, and in different stages of research. As in previous years, we are continuing efforts to expand active participation in the conference to include a cross-section of the AI community and the community's research activities.

Accordingly, we encourage submission of papers that describe theoretical, empirical, or experimental results; represent areas of AI that may have been under-represented in recent conferences; present promising new research concepts, techniques, or perspectives; or discuss issues that cross traditional subdisciplinary boundaries. As outlined below, the paper review criteria are intended to recognize this broader spectrum of research contributions.

*New This Year!*

## Integrated AI Systems Track

An important force holding our field together is the shared goal of building "artificial intelligences" that perform valued activities in real environments by integrating capabilities from AI's diverse subdisciplines.

To encourage and support the development of such integrated AI systems, the AAAI-98 conference program will include a special track highlighting implemented systems that integrate methods from multiple AI subdisciplines. Submissions will be reviewed by a specially selected pool of reviewers who are sensitive to the challenges of presenting this kind of work in a conference format.

Quality standards for this track will be high. Successful papers will advance the field by making clear not only what the system and each component does, but what has been learned from its development and experiments with it. In contrast with IAAI, however, these systems need not be deployed; breadth and depth of integration matter more here. Submitters are strongly encouraged to take advantage of the videotape support option (description follows).

Please watch the conference home page at [www.aaai.org](http://www.aaai.org) and the Winter issue of AI Magazine for further guidelines and instructions regarding this track, and for information regarding the AAAI-98 Demonstrations Program, which will also highlight integrated systems.

## Timetable for Submission

Authors must first submit their paper's title page (preferably electronically, as described below) by Tuesday, January 20, 1998. Authors must then submit six (6) copies of their papers in camera-ready format, to arrive at the AAAI office no later than Thursday, January 22, 1998. Papers received after that date will be returned unopened. Notification of receipt will be mailed via postcard to the first author (or designated author) soon after receipt. All inquiries regarding lost papers must be made by Tues-

day, January 27, 1998. Notification of acceptance or rejection of submitted papers will be mailed to the first (or designated author) by March 13, 1998. Final camera-ready copy of accepted papers will be due on Wednesday, April 8, 1998.

## Electronic Title Page

Because of the tight schedule required to assign reviewers, we require that authors who desire to submit a full paper declare their intention by sending AAAI a title page by Tuesday, January 20, 1998. The preferred method is by using a world-wide web (www) browser such as Netscape® to connect to the form, then filling out the form, and finally pressing the submit button. The form can be found at [www.aaai.org/Conferences/National/1998/titlepage.html](http://www.aaai.org/Conferences/National/1998/titlepage.html) (a link to the form is located on AAAI's home page at [www.aaai.org/](http://www.aaai.org/)). After submitting the form, the page will display a unique tracking number. Authors should print three (3) hard copies of this electronic title page and submit them with the six (6) copies of the body of their paper described below.

Authors who do not have access to a www browser with forms support should mail a printed page to the AAAI office to arrive by Friday, January 16, 1998. The printed page should use the following format:

- *Title:* (title)
- *Author:* (name of first author)
- *Address:* [address of first author]
- *Author:* (name of last author)
- *Address:* (address of last author)
- *Abstract:* (abstract: maximum of 200 words)
- *Content Areas:* (primary keyword), (secondary keyword), (other keyword1), (other keyword2), (other keyword3)
- *Statement of sole submission:* "The author(s) certifies that this paper has not been accepted by and is not currently under review for another conference or journal. Nor will it be submitted for such during AAAI-98's review period."
- *Acknowledgements:* (if any)

## Content Areas

AI architectures  
agent architectures  
software agents  
AI systems  
very large knowledge bases  
massively parallel systems  
applications  
art and music  
artificial life  
audition (auditory perception)  
automated reasoning  
automatic programming  
belief revision  
case-based reasoning  
cognitive modeling  
commonsense reasoning  
computational complexity  
computer aided education  
constraint satisfaction  
decision theory  
design  
diagnosis  
distributed AI  
blackboard systems  
cooperating knowledge-based systems  
coordination  
distributed problem solving  
multiagent planning  
multiagent systems  
negotiation  
social agents  
enabling technologies  
evolutionary computing  
genetic algorithms  
genetic programming  
expert systems  
fuzzy reasoning  
game playing

geometric reasoning  
information retrieval  
knowledge acquisition  
knowledge representation  
decision theoretic methods  
description logics  
logic  
nonmonotonic reasoning  
ontologies  
uncertainty  
lifelike characters  
logic programming  
machine learning  
analogical learning  
Bayesian learning  
case-based learning  
computational learning theory  
connectionist learning  
constructive induction  
decision-tree learning  
explanation based learning  
inductive learning  
inductive logic programming  
multistrategy learning  
reinforcement learning  
speedup learning  
scientific discovery  
theory refinement  
unsupervised learning  
mathematical foundations  
model-based reasoning  
multimedia  
natural language processing  
corpus-based methods  
discourse  
formal models  
machine translation  
natural language generation

natural language understanding  
spoken language generation  
spoken language understanding  
neural networks  
perception  
philosophical foundations  
plan recognition  
planning and control  
anytime planning  
decision theoretic planning  
hierarchical planning  
plan evaluation  
plan execution  
plan monitoring  
reactive control  
situated reasoning  
probabilistic reasoning  
problem solving  
real-time systems  
reasoning about physical systems  
automated modeling  
causal reasoning  
qualitative reasoning  
robotics  
selective perception  
cognitive maps  
hand eye manipulation  
scheduling  
search  
simulation  
spatial reasoning  
temporal reasoning  
theorem proving  
user interfaces  
virtual reality  
vision

## Content Areas

To facilitate the reviewing process, authors are requested to select one primary content area keyword, one secondary content area keyword, and up to three other keywords from the list below, to appear on the electronic title page and submitted paper. Please use only the exact phrases listed in the box that follows. Do not make up new keywords, since they will be ignored by the paper classification software.

## Paper Format and Length for Blind Review

### Format

Authors are requested to submit six (6) copies of the paper for review. Double-sided copies are strongly encouraged. In order to avoid disagreements over paper length, authors are required this year to submit papers for review in camera-ready format. Generic templates and macros for AAAI format for Microsoft Word®, LaTeX, and other systems are available at [www.aaai.org/Publications/Templates/macros-link.html](http://www.aaai.org/Publications/Templates/macros-link.html). Neither computer files nor fax submissions are acceptable.

In cases of hardship only, authors may submit a paper for review that is not in camera-ready format. However, such submissions must be accompanied by a cover letter explaining the hardship and demonstrating that the combi-

nation of total words and figures in the review copy does not exceed the specified number of proceedings pages.

### Length

The preferred length for reviewed papers is six (6) conference pages. Authors of accepted papers may purchase up to two additional proceedings pages for their paper, for a total of eight (8) pages, at \$275/page to be paid when the final camera-ready copy is submitted. In order not to give reviewing advantage to authors who are willing to pay page charges, authors may optionally submit up to a maximum of eight (8) pages for review and decide later whether to publish only six pages at no cost or to purchase additional pages.

Reviewing for AAAI-98 will be blind to the identities of the authors. This requires that authors exercise some care not to identify themselves in their papers.

### Title Page

Each paper submission should be accompanied by three (3) copies of a title page, separate from the body of the paper, including the title of the paper, the names and addresses of all authors, a short abstract of less than 200 words, a list of content areas (see above), tracking number from electronic submission of title page (see above), statement of sole submissions (see above), and ac-

knowledgements (if any). The title page should be a printout of the author's electronic title page submission on the AAAI web site. For authors unable to use the web site, they should follow the format described under "Electronic Title Page" above.

### Paper Body

The second page, on which the paper body begins, should include the same title, abstract, content areas, and tracking number, but not the acknowledgments and names or affiliations of the authors. The references should include all published literature relevant to the paper, including previous works of the authors, but should not include unpublished works. When referring to one's own work, use the third person, rather than the first person. For example, say "Previously, Clinton (Clinton 1996) has shown that..." rather than "In our previous work (Clinton 1996) we have shown that..." Try to avoid including any information in the body of the paper or references that would identify the authors or their institutions. Such information may be added to the final camera-ready version for publication. Please do not staple the title page to the body of the paper.

## Submissions to Multiple Conferences

AAAI-98 will not accept any paper which, at the time of submission, is under review for, or has already been published or accepted for publication in a journal or another conference. Authors are also expected not to submit their papers elsewhere during AAAI's review period. These restrictions apply only to journals and conferences, and not to workshops or similar specialized meetings with limited audiences.

The title page should include a statement that the paper is not under review or accepted for publication in another conference or journal.

## Review Process

Program committee (PC) members will identify papers they are qualified to review based on the information electronically presubmitted (e.g., the paper's title, content areas, and abstract). This information, along with other considerations, will be used to assign each submitted paper to three PC members. Using the criteria given below, they will review the paper independently. Reviews will be done blind to the identities of the authors and their institutions. If the majority of the reviewers of a paper agree to accept or reject it, that recommendation will be followed. If the reviewers are unable to decide, the paper will be discussed at a meeting of the Senior Program Committee members in March. In general, papers will be accepted if they receive at least two positive reviews or if they generate an interesting controversy. Final decisions on all papers will be made by the Program Chairs.

## Review Criteria

Questions that will appear on the review form appear below. Authors are advised to bear these questions in mind while writing their papers. Reviewers will look for papers that meet at least some (although not necessarily all) of the criteria in each category.

*Significance:* How important is the problem studied? Does the approach offered advance the state of the art? Does the paper stimulate discussion of important issues or alternative points of view?

*Originality:* Are the problems and approaches new? Is this a novel combination of existing techniques? Does the paper point out differences from related research? Does it address a new problem or one that has not been studied in depth? Does it introduce an interesting research paradigm? Does the paper describe an innovative combination of AI techniques with techniques from

## Paper Submissions and Inquiries

Please send papers and conference registration inquiries to:

AAAI-98  
American Association for Artificial Intelligence  
445 Burgess Drive  
Menlo Park, CA 94025-3442

Registration and call clarification inquiries (only) may be sent to the internet address: [ncai@aaai.org](mailto:ncai@aaai.org).

Please send program suggestions and inquiries to:

- Charles Rich  
AAAI-98 Program Cochair  
MERL—A Mitsubishi Electric  
Research Laboratory  
201 Broadway, 8th Floor  
Cambridge, MA 02139  
[rich@merl.com](mailto:rich@merl.com)
- Jack Mostow  
AAAI-98 Program Cochair  
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4910 Forbes Avenue  
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Pittsburgh, PA 15213-3734  
[mostow@cs.cmu.edu](mailto:mostow@cs.cmu.edu)

other disciplines? Does it introduce an idea that appears promising or might stimulate others to develop promising alternatives?

*Quality:* Is the paper technically sound? Does it carefully evaluate the strengths and limitations of its contributions? Are its claims backed up? Does the paper offer a new form of evidence in support of or against a well-known technique? Does the paper back up a theoretical idea already in the literature with experimental evidence? Does it offer a theoretical analysis of prior experimental results?

*Clarity:* Is the paper clearly written? Does it motivate the research? Does it describe the inputs, outputs, and basic algorithms employed? Are the results described and evaluated? Is the paper organized in a logical fashion? Is the paper written in a manner that makes its content accessible to most AI researchers?

## Videotape Support

If authors feel that an understanding of the dynamic behavior exhibited by their system is an important factor in judging the technical merit of the work, they may optionally include six (6) copies of a videotape of not more than five (5) minutes duration in NTSC-VHS (US standard only) format to the AAAI office by Thursday, January 22, 1998, as

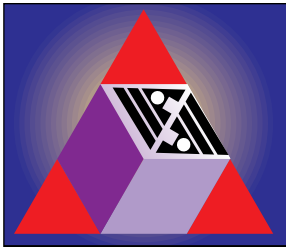
part of their paper submission. Tapes should be labeled only with the tracking number and title of the paper submission; tapes cannot be returned.

## Publication

Accepted papers will be allocated six (6) pages in the conference proceedings. Up to two (2) additional pages may be used at a cost to the authors of \$275 per page. Papers exceeding eight (8) pages and those violating the instructions to authors will not be included in the proceedings.

## Copyright

Authors will be required to transfer copyright of their paper to AAAI.



Call for Participation and Call for Papers—Student Abstract & Poster Program

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## Student Abstract and Poster Program

AAAI-98 invites submissions to the student abstract and poster program. The goal of this program is to provide a forum in which students can present and discuss their work during its early stages, meet some of their peers who have related interests, and introduce themselves to more senior members of the field. The program is open to all pre-Ph.D. students. Nonstudent advisors or collaborators should be acknowledged appropriately, as coauthors or otherwise. However, students are requested to honor the spirit of the program by submitting only work for which they are primary investigators.

### Requirements for Submission

Authors must submit six (6) printed copies of a two-page abstract describing their research to arrive at the AAAI office no later than Thursday, January 22, 1998. Abstracts received after that date will be returned unopened. Notification of receipt will be mailed by postcard to the author. All inquiries regarding lost abstracts must be made by Monday, February 2, 1998. Notification of acceptance or rejection of submitted abstracts will be mailed to the author by March 18, 1998. Camera-ready copy of accepted abstracts will be due by April 8, 1998.

### Abstract Format

All six (6) copies of a submitted abstract must be clearly legible. Neither computer files nor fax submissions are acceptable. Submissions must be printed on 8 1/2 x 11 inch or A4 paper using 12 point type (10 characters per inch for typewriters). Each page must have a maximum of 38 lines and an average of 75 characters per line (corresponding to the LaTeX article-style, 12 point).

## Length

All abstracts must be no more than two pages, not including the bibliography. The first two pages must include the following: title; the primary author's full name, affiliation, postal address, phone number, and e-mail address; all coauthors' full names and affiliations; text; and any figures, tables, or diagrams. Up to one additional page may be used exclusively for the bibliography if necessary. Papers exceeding the specified length and formatting requirements are subject to rejection without review.

## Submissions to AAAI-98 or Other Conferences

Students are free to submit abstracts for work reported in a regular paper submitted to the AAAI-98 or another conference, but not for work that has already been published. Abstracts will be accepted or rejected for the student session regardless of the outcomes of related paper submissions.

## Review Criteria

Each abstract will be reviewed against the following criteria:

*Significance:* Does the work address an important problem? Is the potential contribution of the approach clear? Has the author placed the work critically in context of the current field?

*Originality:* Is this a novel problem or approach? Is related work cited and contrasted to this approach?

*Clarity:* Is the abstract clearly written? Is the state of development of the work clear? Are theoretical or actual examples given? If no results are presented, is the feasibility of the approach evident?

## Publication

Accepted abstracts will be allocated one (1) page in the conference proceedings. Students will be required to transfer copyright of the abstract to AAAI.

## Poster Session

Accepted abstracts will be allocated presentation time and space in the student poster display area at the conference. Student authors of accepted abstracts must agree to prepare a poster representing the work described in their abstracts and to be available to discuss their work with visitors during their allocated time in the student poster display area.

## Student Abstract Submissions & Inquiries

Please send abstracts to:  
AAAI-98 Student Abstracts  
American Association for Artificial Intelligence  
445 Burgess Drive  
Menlo Park, CA 94025-3442 USA

Registration and call clarification inquiries (only) may be sent to the internet address: [ncai@aaai.org](mailto:ncai@aaai.org). Please send student program suggestions and inquiries to:

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