



Twelfth National Conference on Artificial Intelligence (AAAI-94)

Seattle, Washington

CALL FOR PAPERS • VIDEOS • STUDENT ABSTRACTS

Call for Papers

AAAI-94 is the twelfth 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: a) principles underlying cognition, perception, and action; b) design, application, and evaluation of AI algorithms and systems; c) architectures and frameworks for classes of AI systems; and d) 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 sub-disciplines, in different research paradigms, and in different stages of research. Based on discussions among program committee members during the past few years, we aim to expand active participation in this year's conference to include a larger cross-section of the AI community and a larger cross-section of 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 sub-disciplinary boundaries. As outlined below, we have revised and expanded the paper review criteria to recognize this broader spectrum of research contributions. We intend to accept more of the papers that are submitted and to publish them in an expanded conference proceedings.

Requirements for Submission

Authors must submit six (6) complete printed copies of their papers to the AAAI office by January 24, 1994. Papers received after that date will be returned unopened. Notification of receipt will be mailed to the first author (or designated author) soon after receipt. All inquiries regarding lost papers must be made by February 7, 1994. Authors should also send their paper's title page in an electronic mail message to abstract@aaai.org by January 24, 1994. Notification of acceptance or rejection of submitted papers will be mailed to the first author (or designated author) by March 11, 1994. Camera-ready copy of accepted papers will be due about one month later.

Paper Format for Review

All six (6) copies of a submitted pa-

per must be clearly legible. Neither computer files nor fax submissions are acceptable. Submissions must be printed on 8 1/2" x 11" 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). Double-sided printing is strongly encouraged.

Length

The body of submitted papers must be at most 12 pages, including title, abstract, figures, tables, and diagrams, but excluding the title page and bibliography. Papers exceeding the specified length and formatting requirements are subject to rejection without review.

Blind Review

Reviewing for AAAI-94 will be blind to the identities of the authors. This requires that authors exercise some care not to identify themselves in their papers. Each copy of the paper must have a title page, separate from the body of the paper, including the title of the paper, the names and addresses of all authors, a list of content areas (see below) and any acknowledgements. The second page should include the exact same title, a short abstract of less than 200 words, and the exact same content areas, but not the names nor affiliations of the authors. This page may include text of the paper. The

Paper Submissions & Inquiries

Please send papers and conference registration inquiries to:
AAAI-94, American Association for Artificial Intelligence 445 Burgess Drive
Menlo Park, CA 94025-3496

Registration and call clarification inquiries (ONLY) may be sent to the Internet address: NCAI@aaai.org.

Please send program suggestions and inquiries to:

Barbara Hayes-Roth, Program Cochair, Knowledge Systems Laboratory Stanford University 701 Welch Road, Building C, Palo Alto, CA 94304
bhr@ksl.stanford.edu

Richard Korf, Program Cochair Department of Computer Science University of California, Los Angeles Los Angeles, CA 90024 korf@cs.ucla.edu

Howard Shrobe, Associate Program Chair Artificial Intelligence Laboratory Massachusetts Institute of Technology Cambridge, MA, 02139
hes@reagan.ai.mit.edu

references should include all published literature relevant to the paper, including previous works of the authors, but should not include unpublished works of the authors. When referring to one's own work, use the third person, rather than the first person. For example, say "Previously, Korf [17] has shown that...", rather than "In our previous work [17] 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 can be added to the final camera-ready version for publication. Please do not staple the title page to the body of the paper.

Electronic Title Page

A title page should also be sent via electronic mail to abstract@aaai.org, in plain ASCII text, without any formatting commands for LaTeX, Scribe, etc. Each section of the electronic title page should be preceded by the name of that section as follows:

title: <title>
author: <name of first author>
address: <address of first author>
author: <name of last author>
address: <address of last author>
abstract: <abstract>
content areas: <first area>, ..., <last area>

To facilitate the reviewing process, authors are requested to select 1-3 appropriate content areas from the list below. Authors are welcome to add additional content area descriptors as needed.

AI architectures, artificial life, automated reasoning, control, belief revision, case-based reasoning, cognitive modeling, common sense reasoning, computational complexity, computer-aided education, constraint satisfaction, decision theory, design, diagnosis, distributed AI, expert systems, game playing, genetic algorithms, geometric reasoning, knowledge acquisition, knowledge representation, machine learning, machine translation, mathematical foundations, multimedia, natural language processing, neural networks, nonmonotonic reasoning, perception, philosophical foundations, planning, probabilistic reasoning, problem solving, qualitative reasoning, real-time systems, robotics, scheduling, scientific discovery, search, simulation, speech understanding, temporal reasoning, theorem proving, user interfaces, virtual reality, vision

Submissions to Multiple Conferences

Papers that are being submitted to other conferences, whether verbatim or in essence, must reflect this fact on the title page. If a paper appears at another conference (with the exception of specialized workshops), it must be withdrawn from AAAI-94. Papers that violate these requirements are subject to rejection without review.

Review Process

Program Committee members will identify papers they are qualified to review based on each paper's title, content areas, and electronic abstract. This information, along with other considerations, will be used to assign each submitted paper to three reviewers. Using the criteria given below, they will initially review the papers independently, and then discuss their reviews. The reviews will be forwarded to an Area Chair for a final recommendation and possibly further discussion during the program committee meeting in March. Note that the entire re-view process will be blind to the identities of the authors and their institutions. In general, papers will be accepted if they receive at least two positive recommendations, including the Area Chair's, or if they generate an interesting controversy among the reviewers. The final decisions on all papers will be made by the program chairs.

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 (though 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 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?

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 \$250 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.

Videotape Presentations

The purpose of the Twelfth National Conference on Artificial Intelligence is to promote research in artificial intelligence (AI) and scientific interchange among AI researchers and practitioners. As one means of achieving that purpose, the AAAI-94 program committee invites submission of videotape presentations of implemented systems which illustrate behavior based on principles, methods, and/or tools resulting from AI research. Presentations of application systems that show the effectiveness of AI research results for solving problems of commercial or governmental interest are invited, although presentations whose primary focus is on the benefits of deployed application systems may be more appropriate for submission to the IAAI conference.

The video program will be widely viewable at the conference, and will be published by AAAI and available for sale after the conference.

Requirements for Submission

Authors must submit three (3) copies of a videotape of not more than five (5) minutes duration in NTSC-VHS (US standard only) format to the AAAI office by January 31, 1994. Tapes received after that date will be returned unopened. Submissions must be accompanied by a submission letter that includes:

(1) Title of the videotape. (2) Full names, postal addresses, phone numbers, and e-mail addresses of all authors. (3) Duration of tape in minutes. (4) Three copies of an abstract of not more than two pages in length, containing the title of the video, and full names and addresses of the authors. (5) Author's permission to copy tape for review purposes.

Notification of receipt will be mailed to the first author (or designated author) soon after receipt. All inquiries regarding lost submissions must be made by February 7, 1994. Tapes cannot be returned; authors should retain extra copies for making revisions.

Notification of acceptance or rejection of submitted tapes will be mailed to the first author (or designated author) by March 14, 1994. Camera-ready copy of the video's abstract, edited in the format specified in the acceptance letter will be due about one month later. Authors will also have the opportunity to submit a revised version of their videotape about one month following notification of acceptance. Revised tapes must not be more than five (5) minutes duration and must be in NTSC-VHS (U.S. Standard only) format.

Review Criteria

Each tape will be rigorously reviewed by experts in the subject matter areas of the presentation. The following general criteria will guide the selection: Significance and originality of system functionality presented; clarity of presentation of system functionality and relationship to AI research results; quality of presentation (including audio, video, and pace). Preference will be given to systems that show a high level of maturity. Tapes that are deemed to be advertising commercial products, propaganda, purely expository materials, merely taped lectures, or material not of scientific or technical value will be rejected.

Publication

The accepted videos will be published and available for sale after the conference. Abstracts of accepted videos will be allotted one page in the conference proceedings. Authors will be required to transfer copyright of their abstract (but not the video) to AAAI.

Please send videotapes and conference registration inquiries to: AAAI-94 American Association for Artificial Intelligence, 445 Burgess Drive Menlo Park, CA 94025-3496. Registration and call clarification inquiries (ONLY) may be sent to the internet address: NCAI@aaai.org.

Video Program Chairs: John E. Laird and Elliot Soloway, Artificial Intelligence Laboratory, University of Michigan, 1101 Beal Ave., Ann Arbor, MI 48109-2110

Student Abstract & Poster Program

AAAI-94 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-PhD students. Non-student 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 the AAAI office by January 24, 1994. Abstracts received after that date will be returned unopened. Notification of receipt will be mailed to the author. All inquiries regarding lost abstracts must be made by February 7, 1994. Notification of acceptance or rejection of submitted abstracts will be mailed to the author by March 11, 1994. Camera-ready copy of accepted abstracts will be due about one month later.

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" 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, including: title, author's full name, postal address, phone number, e-mail address, text, any figures, tables, diagrams, and bibliography. Papers exceeding the specified length and formatting requirements are subject to rejection without review.

Submissions to AAAI-94 or other Conferences

Students are free to submit abstracts for work reported in a regular paper submitted to the AAAI-94 or another conference. 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? *Originality*: Is the problem or approach presented new? *Clarity*: Is the abstract clearly written?

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.

Student Abstract Submissions & Inquiries

Please send abstracts to:

AAAI-94, American Association for Artificial Intelligence, 445 Burgess Drive, Menlo Park, CA 94025-3496

Registration and call clarification inquiries (ONLY) may be sent to the internet address:

NCAI@aaai.org.

Please send student program suggestions and inquiries to:

Kristian J. Hammond
Department of Computer Science
The University of Chicago Chicago, IL 60637
hammond@cs.uchicago.edu

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.