

Cognitive Science News

As of January 1, 1993 all manuscript submissions and other correspondence should be sent to the new Editor-in-Chief of Cognitive Science, at the following address:

Dr. James G. Greeno
School of Education
Stanford University
Stanford, CA 94305

Phone: 415 / 723-0433

Email address: greeno@csl.stanford.edu

CALL FOR PAPERS

The Sixth Annual CUNY Sentence Processing Conference will be held March 18-20, 1993 at the University of Massachusetts at Amherst. Paper and poster abstracts (100-200 words) should be submitted by January 8, 1993. Submissions on all topics in sentence processing are invited. Submissions concerning the interface of syntactic and semantic processing are especially encouraged. Abstracts should be sent to:

Ms. Anne Donnis
CUNY Sentence Processing Conference
Department of Psychology
University of Massachusetts
Amherst, MA 01003

Abstracts may be sent via electronic mail (SENPROC@psych.umass.edu) or FAX (413-545-0996).

Please indicate if you would like your submission to be a spoken paper or a poster. Also indicate if you are willing to present a poster if there is no space for a spoken paper. Information regarding registration and housing may also be obtained from Anne Donnis.

SUNY at Binghamton
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PACSS Core Faculty

Jerrold L. Aronson, Program Director, Professor of Philosophy. Philosophy of science, of mind, physics, metaphysics.

Eric Dietrich, Assistant Professor of Philosophy. Artificial Intelligence, Connectionism, Problem-solving systems.

Rom Harre, Adjunct Professor of Philosophy. Philosophy of psychology, Systems science, Philosophy of science, social science.

Jack Kaminsky, Professor of Philosophy. Semantic analysis, Philosophy of logic, Ontology.

George J. Klir, Distinguished Professor of Systems Science. General systems methodology, Logic design and computer architecture, Information theory, Expert Systems, Uncertainty, Fuzzy set theory.

Howard Pattee, Professor of Systems Science. Theoretical biology, Evolutionary models of complex systems, Linguistic controls of dynamic systems.

Lawrence D. Roberts, Associate Professor of Philosophy. Philosophy of language, Computational models of reference.

Eileen C. Way, Assistant Professor of Philosophy. Artificial intelligence, Natural language processing, Cognitive science, Philosophy of mind.

Assistantships Available

For more information call or write to:

Jerrold L. Aronson, Director

PACSS, Department of Philosophy

SUNY-Binghamton, Binghamton, New York 13901

(607-777-2227 or 607-777-2446)

CALL FOR PAPERS**Applied Intelligence:**

**The International Journal of Artificial Intelligence,
Neural Networks and Complex Problem Solving Technologies**

Special Issue on Knowledge Base Management

Knowledge based systems are now routinely used in thousands of "real world" applications. Most such applications involve relatively small knowledge bases, containing hundreds rather than thousands of units (objects, rules, frames, . . .). Developing the next generation of knowledge based systems with knowledge bases containing hundreds of thousands or even millions of units will require first and foremost a technology for building, accessing and managing these large knowledge bases. Such a technology will

be founded on new implementation techniques that extend known ones for knowledge bases and databases and address issues of physical storage management (how do you minimize disk I/Os during the evaluation of a query), query optimization (transforming a query to an equivalent, but simpler expression), concurrency control (interleaving the execution of knowledge base operations to optimize the use of computer resources), constraint enforcement and others. Apart from such traditionally database-oriented techniques, *knowledge* base management requires new techniques, specific to knowledge bases such as ones for efficient implementations of inference mechanisms (terminological subsumption, deduction, induction and abduction). Moreover, knowledge base *management* demands new tools for knowledge acquisition, knowledge base validation, verification and maintenance, as well as new architectures that accommodate a multi-user, distributed operating environment.

This issue of *Applied Intelligence* is dedicated to the topic of knowledge base management. Topics of interest to this issue include efficient implementation techniques and management tools for knowledge bases, such as the following:

- Novel knowledge representation schemes
- Architectures for knowledge base management systems
- Query languages and query processing
- Concurrency control and recovery
- Physical clustering and indexing techniques for knowledge bases
- Efficient implementations of interference mechanisms
- Specialized inference mechanisms (e.g., for temporal, spatial knowledge)
- Constraint enforcement and rule management
- Performance evaluation of knowledge based systems
- Knowledge acquisition tools
- Knowledge base validation, verification and maintenance tools
- Knowledge base visualization tools

Manuscripts should not exceed 35 typewritten pages including figures and references. Each submission must include 5 copies of a manuscript with a title, full addresses of authors and an abstract. Submissions must be post-marked on or before January 15, 1993 and must be sent to

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Pratt Building, Rm 290G
Toronto, Canada
M5S 1A4

Important Dates

January 15	Due date for 5 copies of each submission
April 15	Notification of acceptance or rejection
June 15	Due date for final drafts of accepted manuscripts
October	Publication date of the special issue

**POSTDOCTORAL & PREDOCTORAL TRAINING
IN NEURAL PROCESSES IN COGNITION**

The National Science Foundations has established an interdisciplinary program investigating the neurobiology of cognition utilizing neuroanatomical, neurophysiological, and computer simulation procedures. Individuals perform original research investigating cortical function at multiple levels of analysis. State-of-the-art facilities include: computerized microscopy, human and animal electrophysiological instrumentation, behavioral assessment laboratories, brain imaging, the Pittsburgh Supercomputing Center, and access to human clinical populations. This is a joint program between the Univ. of Pittsburgh, its School of Medicine, and Carnegie Mellon Univ. Applications are encouraged from individuals with interest in biology, psychology, engineering, physics, mathematics, or computer science. Post-doctoral applicants must be permanent U.S. residents. Application deadline is February 1, 1993.

For information contact W. Schneider, Program Director, Neural Processes in Cognition, University of Pittsburgh, 3939 O'Hara St., Pittsburgh, PA 15260 (412-624-7061). E-mail: NEUROCOG@PITTVMS.BITNET.
