

CALL FOR NOMINATIONS FOR IJCAI AWARDS

THE IJCAI AWARD FOR RESEARCH EXCELLENCE

The IJCAI Award for Research Excellence is given, at each International Joint Conference on Artificial Intelligence, to a scientist who has carried out a program of research of consistently high quality yielding several substantial results. If the research program has been carried out collaboratively the award may be made jointly to the research team. The first recipient of this award was John McCarthy in 1985.

The Award carries with it a certificate and the sum of \$1,000 plus travel and living expenses for the IJCAI. The researcher(s) will be invited to deliver an address on the nature and significance of the results achieved and write a paper for the conference proceedings. Primarily, however, the award carries the honour of having one's work selected by one's peers as an exemplar of sustained research in the maturing science of Artificial Intelligence.

We hereby call for nominations for The IJCAI Award for Research Excellence to be made at IJCAI-87 in Milan. The note on Selection Procedures for IJCAI Awards provides the relevant details.

THE COMPUTERS AND THOUGHT AWARD

The Computers and Thought Lecture is given at each International Joint Conference on Artificial Intelligence by an outstanding young scientist in the field of artificial intelligence. The Award carries with it a certificate and the sum of \$1,000 plus travel and subsistence expenses for the IJCAI. The Lecture is one evening during the Conference, and the public is invited to attend. The Lecturer is invited to publish the Lecture in the conference proceedings. The Lectureship was established with royalties received from the book *Computers and Thought*, edited by Feigenbaum and Feldman; it is currently supported by income from IJCAI funds.

Past recipients of this honour have been Terry Winograd (1971), Patrick Winston (1973), Chuck Rieger (1975), Douglas Lenat (1977), David Marr (1979), Gerald Sussman (1981), Tom Mitchell (1983), and Hector Levesque (1985).

Nominations are invited for The Computers and Thought Award to be made at IJCAI-87 in Milan. The note on Selection Procedures for IJCAI Awards covers the nomination procedures to be followed.

SELECTION PROCEDURES FOR IJCAI AWARDS

Nominations for The Computers and Thought Award and The IJCAI Award for Research Excellence are invited from all in the Artificial Intelligence international community. The procedures are the same for both awards.

There should be a nominator and a seconder, at least one of whom should not have been in the same institution as the nominee. The nominee must agree to be nominated. There are no other restrictions on nominees, nominators, or seconders. The nominators should

prepare a short submission (less than 2,000 words) for the voters, outlining the nominee's qualifications with respect to the criteria for the particular award.

The award selection committee is the union of the Program, Conference, and Advisory Committees of the upcoming IJCAI and the Board of Trustees of IJCAI, with nominees excluded. Nominations should be submitted before 1 December 1986, to the Conference Chair for IJCAI-87:

Dr Alan Bundy,
IJCAI-87 Conference Chair
Department of Artificial Intelligence
University of Edinburgh
80 South Bridge
Edinburgh, EH1 1HN
Scotland
(+44 31) 225-7774 ext 242
ArpaNet: bundy@rutgers.arpa
JANet: bundy@uk.ac.edinburgh

ANNOUNCEMENTS

THE CATALOGUE OF ARTIFICIAL INTELLIGENCE TOOLS

The Catalogue of Artificial Intelligence Tools is a kind of mail order catalogue of AI techniques and portable software. Its purpose is to promote interaction between members of the AI community. It does this by announcing the existence of AI tools, and acting as a pointer into the literature. Thus the AI community will have access to a common, extensional definition of the field, which will:

- promote a common terminology,
- discourage the reinvention of wheels, and
- act as a clearing house for ideas and software.

The catalogue is a reference work providing a quick guide to the AI tools available for different jobs. It is not intended to be a textbook like the *Artificial Intelligence Handbook*. It, intentionally, only provides a brief description of each tool, with no extended discussion of the historical origin of the tool or how it has been used in particular AI programs. The focus is on techniques abstracted from their historical origins.

The original version of the catalogue was hastily built in 1983 as part of the UK SERC-DoI, IKBS, Architecture Study. It has now been adopted by the UK Alvey Programme and is both kept as an on-line document undergoing constant revision and refinement and published as a paperback by Springer Verlag. Springer Verlag have agreed to reprint the Catalogue at frequent intervals in order to keep it up to date.

The on-line and paperback versions of the catalogue meet different needs and differ in the entries they contain. In particular, the on-line version was designed to promote UK interaction and contains all the entries we received that meet the criteria defined below. Details of how to access the on-line version are available from

John Smith
Rutherford-Appleton Laboratory

Chilton, Didcot, Oxon OX11 0QX
United Kingdom

The paperback version was designed to serve as a reference book for the international community, and does not contain entries which are only of interest in a UK context.

By "AI techniques" we mean algorithms, data (knowledge) formalisms, architectures, and methodological techniques that can be described in a precise, clean way. The catalogue entries are intended to be non-technical and brief, but with a literature reference. The reference might not be the "classic" one. It will often be to a textbook or survey article. The border between AI and non-AI techniques is fuzzy. Since the catalogue is to promote interaction, some techniques are included because they are vital parts of many AI programs, even though they did not originate in AI.

By "portable AI software" we mean programming languages, shells, packages, toolkits etc. available for use by AI researchers outside the group of the implementor, including both commercial and non-commercial products. To obtain a copy of software, do *not* write to us or the contributor of the entry; look at the "Availability" field or write to the implementor. We hope that (s)he will supply sufficient documentation for the system to be used by an outsider, but do not expect non-commercial products to be as professionally polished as commercial ones.

We have not included in the catalogue separate entries for each slight variation of a technique, programming language, etc. Neither have we always included details of how to obtain the software, nor descriptions of AI programs tied to a particular application, nor of descriptions of work in progress. The catalogue is not intended to be a dictionary of AI terminology nor to include definitions of AI problems.

Entries are short (abstract length) descriptions of a technique or piece of software. They include a title, list of aliases, contributor's name, paragraph of description, information on availability and references. The contributor's name is that of the original contributor of the entry. Only occasionally is the contributor of the entry also the implementor of the software or the inventor of the technique. The "Availability" field or the reference is a better guide to the identity of the implementor or inventor. Some entries have been subsequently modified by the referees and/or editorial team, and these modifications have not always been checked with the original contributor, so (s)he should not always be held morally responsible, and should never be held legally responsible.

If you would like to submit an entry for the catalogue then please send the information requested below to:

Alan Bundy
Department of Artificial Intelligence
University of Edinburgh
80 South Bridge
Edinburgh, EH1 1HN, Scotland.

(+44 31) 225-7774 ext 242
JANet: Bundy@UK.Ac.Edinburgh
ARPAnet: Bundy@Rutgers.Arpa

FORMAT FOR ENTRIES

Title:

Alias:

Abstract: [Paragraph length description of tool or technique]

Contributor: [Your name]

References: [Aim for the most helpful rather than the "classic" one]

Availability: [e.g. commercially available with documentation and support, available as a research vehicle only with limited documentation]

Environment: [necessary supporting software/hardware]

From: [contact address for distribution, incl. telephone number and electronic mail address if appropriate]

TINLAP3

7-9 January 1987, New Mexico State University, Las Cruces, New Mexico

TINLAP3 will be the third in the series of interdisciplinary workshops

Theoretical Issues in Natural Language Processing. The format will be as in MIT (1985) and Illinois (1978): invited panels of distinguished figures in the field will discuss pre-circulated statements of position. Lively audience participation is anticipated. The panels are intended to cover the major contentious issues of the moment. TINLAP3 is being supported by the Association of Computational Linguistics and funds are also being sought from NSF, AAAI, and ACM.

TINLAP GRAND COMMITTEE

Nick Cercone, *Simon Fraser University*
Richard Rosenberg, *Dalhousie University*
Roger Schank, *Yale University*
David Waltz, *Brandeis University*
Bonnie Webber, *University of Pennsylvania*

TINLAP3 GENERAL CHAIR

Andrew Ortony, *University of Illinois*

TINLAP3 PROGRAM CHAIR

Yorick Wilks, *New Mexico State University*

PANELS

Connectionist and Other Parallel Approaches to Natural Language processing

- Is NLP inevitably committed to a symbolic form of representation?
- Can syntactic, semantic or world knowledge be represented in that paradigm if taken seriously?
- What parts of current CL will fare worst if there turn out to be significant empirical advances with connectionist parsing?

- Are there any yet? (I.e., how far do we trust simulations programmed only on serial machines?)
- What new approaches to syntax, semantics or pragmatics will be needed if this approach turns out to be empirically justified?
- Will it just bring back all the old views associated with associationism, and will they be changed in the journey?
- Is parallel parsing just a new implementation or a real paradigm shift?

Dave Waltz, *Thinking Machines and Brandeis*, **Chair**
Martin Kay, *Xerox-PARC*

Gary Cottrell, *University of California at San Diego*

Gene Charniak, *Brown University*

Jay McClelland, *Carnegie-Mellon University*

Unification and the New Grammatism

- How far does this really differ from the CFG position of the sixties?
- Does it yet have any empirical successes in terms of working systems?
- To what extent are these grammatical formalisms motivated by processing considerations?
- To what extent are these processing claims substantiated?
- Are we converging to some class of formalisms that are relevant for processing and, if so, how can this class be characterised in a theoretical manner?
- What are the prospects of these types formalisms becoming the basis for future natural language processing research?
- Has the processing paradigm now really fundamentally influenced linguistics?
- Do processing considerations and results show that such systems when implemented can be neutral between analysis and production?
- Has everyone really been doing unification for decades and just found out?
- Is it a real advance or just a Hollywood term?

Fernando Pereira, *SRI International*, **Chair**

Gerald Gazdar, *University of Sussex*

Steve Pulman, *Cambridge University*

Aravind Joshi, *University of Pennsylvania*.

(one more to be confirmed)

World and World Representations

- How have these suddenly become more interesting?
- Do they offer a way through from the old "primitive" dispute, and do they offer a way out from having to separate world and linguistic knowledge?
- How does what we know about words fit into the language understanding and generation process, and is that different for understanding and generation?

Don Walker, *Bell Communications Research*, **Chair**

Bran Boguraev, *Cambridge University*

Bob Amsler, *Bell Communications Research*

(two more to be confirmed)

Formal versus Commonsense Semantics

- What does Montague grammar or situation semantics have to say to CL?
- Can we distinguish the good parts from what is bad and useless?
- For what NLP applications might these formalisms be particularly appropriate?
- What have such theories chosen to ignore, in terms of data or intuitions?
- How are they to be computed: compositionally, randomly?
- How well can such formalisms mesh with the rest of language representation processes, e.g. discourse and pragmatic analysis?

Yorick Wilks, *New Mexico State University*, **Chair**

David Israel, *SRI International*

Geoff Nunberg, *Stanford University/Xerox-PARC*

Wendy Lehnert, *Yale University*

Karen Sparck-Jones, *Cambridge University*

Why Has Theoretical NLP Made So Little Progress?

- Has CL advanced in this respect since Tinlap2 in 1978?
- What can NLP systems do today in the light of what we would have predicted at Tinlap2?
- Why are we no nearer to a common notation for systems since KRL? – Would we be helped by CL textbooks geared to particular programming languages (one such is now in preparation)?
- Is it a case of just cycling through ranges of obscure syntactic and semantic formalisms (and then rediscovering them every 10 years or so)?
- Are there serious problems about the overall cognitive paradigm being applied to NLP?
- Are there any serious alternatives to the current paradigms and what would they imply to NLP research directions and goals?

Roger Schank, *Yale University*, **Chair**

Norm Sondheimer, *University of Southern*

California–Information Sciences Institute

Larry Birnbaum, *Yale University*

Mitch Marcus, *AT&T Bell Laboratories*

(one more to be confirmed)

Discourse Theory and Speech Acts

- Is there yet any serious discourse theory with testable computational and empirical consequences?
- What phenomena ought a processing theory of discourse understanding/generation to address itself to that are not already being attended to currently?
- What aspects of discourse are language problems and which are general AI/KR problems?
- What makes a theory of discourse a processing theory?
- Does spoken language affect one's theory of discourse?
- Is there any real hope that we will be able to recognise the plans/goals etc. of a speaker?
- How much of conversation is carried on through the linguistic window anyway?

- Do current theories of text and dialogue discourse mesh, and should they?

Barbara Grosz, *Harvard University*, **Chair**
 Julia Hirschberg, *AT&T Bell Laboratories*
 Ray Perrault, *SRI International*
 Bob Wilensky, *University of California at Berkeley*
 (one more to be confirmed)

Reference: the Interaction of Language and the World

- Question to be provided by Panel chair.

Doug Appelt, *SRI International*, **Chair**
 Deborah Dahl, *SDC Inc.*
 Bonnie Webber, *University of Pennsylvania*
 Amichai Kronfeld, *SRI International*
 Brad Goodman, *BBN Laboratories Inc.*

Metaphor

- How relevant are the philosophical, linguistic, and psychological literatures on metaphor?
- Can any of the recent work in dialogue, planning and speech acts be applied to understanding metaphor?
- Are existing knowledge formalisms (e.g. conceptual dependency, scripts, semantic networks, KLONE) adequate for metaphor? If not, why not?
- Given that the recognition of metaphor involves matching together large-scale knowledge structures, are there any existing procedures that do this adequately?
- How can this matching be done?
- How might we record the degree of match?
- Are there additional types of processing necessary for recognising metaphor?
- How should metaphor be represented in semantic representations of text?
- Are there situations when a metaphor should be "resolved", and others when its tension should remain?
- How can we recognise those situations?

Dedre Gentner, *University of Illinois*, **Chair**
 Andrew Ortony, *University of Illinois*
 Ed Plantinga, *University of Toronto*
 George Lakoff, *University of California at Berkeley*
 (one more to be confirmed)

Natural Language Generation

- Will the demands of language production bring AI, theoretical linguistics (and of course CL) closer together than the demands of comprehension did in the past?
- Is there anything special about generation?
- Does generation constrain problems differently from understanding, in that it would not matter if some high-powered machine could understand things no human could say, but it would matter if the same machine generated them!?
- Are knowledge structures, of the world as much as language, the same or different for understanding and generation?

- The relation between the message the system wants to convey and its lexical, syntactic etc. abilities to do it.

Aravind Joshi, *University of Pennsylvania*, **Chair**
 Dave MacDonald, *University of Massachusetts at Amherst*
 Doug Appelt, *SRI International*
 Bill Mann, *University of Southern California—Information Sciences Institute*
 Mitch Marcus, *AT&T Bell Laboratories*

REGISTRATION

Registration covers pre-circulated preprints, mid-session refreshments, etc., some local transportation, and administration.

Registration fees	Non-student:	\$50
	Full-time students:	\$30

Registration forms are available from

TINLAP3
 Box 3CRL
 New Mexico State University
 Las Cruces, NM 88003

WHERE

The workshop will be held at the New Mexico State University main campus (Las Cruces), Rio Grande Corridor for Technical Excellence, Computing Research Lab. (505-646-5466) for further details.

Forming the western corner of a triangle with White Sands and El Paso, Las Cruces, a city of about 50,000 people, is situated in southern New Mexico between the spectacular Organ Mountains fifteen miles to the east, and the historic Rio Grande River to the west. Two miles west of Las Cruces, near the Rio Grande, is La Mesilla, the old Mexican village where the Gadsden Purchase was signed. The town square is bordered by restaurants and shops, with Indian arts – pottery, paintings, jewelry, baskets, and weaving.

Also nearby are the White Sands National Monument (about 55 miles), the Carlsbad Caverns (about 160 miles), and Sierra Blanca, a 12,000 foot mountain with fine skiing (about 130 miles; an hour and a half drive).

The weather in early January is usually clear and sunny; temperatures are usually in the 50s in the daytime, and the 20s at night.

NOTE

The full program will be mailed to all registrants in September and the preprints in December. Detailed accommodation and travel information will be sent on receipt of completed registration form. Hotel rates will be from \$20-\$50 per night. Since accommodation may be limited, it is advisable to register early to obtain hotel information.

PEOPLE ON THE MOVE

Alan Frisch, formerly at the University of Essex, is now an Assistant Professor at the
 Department of Computer Science
 University of Illinois
 1304 West Springfield Avenue
 Urbana, IL 61801
 (217) 333-3426
 arpanet: frisch@uiuc

Barbara Grosz, formerly at SRI International and the Center for the Study of Language and Information at Stanford University, is now Gordon McKay Professor of Computer Science at
 Division of Applied Sciences
 Harvard University
 Cambridge, MA 02138
 grosz@harvard

CALENDAR OF MEETINGS

1986

- 11-15 August AAAI National Conference on Artificial Intelligence, Philadelphia, Pennsylvania
 15-17 August Cognitive Science Society, University of Massachusetts, Amherst, Massachusetts
 25-29 August COLING-86, Bonn, West Germany
 8-10 September AFIPS NCC-Telecommunications, Philadelphia, Pennsylvania
 10-12 October ESCOL 86, (Eastern States Conference on Linguistics), University of Pittsburgh and Carnegie-Mellon University, Pittsburgh, Pennsylvania (*see Vol. 12(2): 145*)
 22-24 October Fourth Symposium on Empirical Foundation of Information and Software Sciences (EFISS), Georgia Institute of Technology, Atlanta, Georgia (*see page 222*)
 7-9 November NELS (North Eastern Linguistic Society), Cambridge, Massachusetts
 9-11 November Advances in Lexicology, Centre for the New OED, University of Waterloo, Waterloo, Ontario, Canada
 27-30 December Linguistic Society of America/American Association for Applied Linguistics/American Dialect Society, New York, New York

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- 7-9 January TINLAP3, New Mexico State University, Las Cruces, New Mexico
 1-3 April Third ACL European Chapter Conference, Copenhagen University, Copenhagen, Denmark (*see page 223*)
 6-10 April AISB 87 Conference, Edinburgh, United Kingdom
 15-18 June NCC '87 (National Computer Conference), McCormick Place, Chicago, Illinois (*see page 225*)
 28 June-7 August LSA/ACL/AAAI Linguistic Institute, Stanford University, Stanford, California (*see page 224*)
 6-9 July ACL Annual Meeting, Stanford University, Stanford, California (*see page 223*)
 10-11 July Conference on Logic and Linguistics, Stanford University, Stanford, California (*see page 224*)
 11-13 July International Conference on Data Bases in the Humanities and Social Sciences, Auburn University, Montgomery, Alabama
 13-17 July AAAI National Conference on Artificial Intelligence, Seattle, Washington
 10-15 August 14th International Congress of Linguistics, Berlin, East Germany
 16-21 August World Congress of Applied Linguistics, University of Sydney, Sydney, Australia
 16-22 August 16th International Congress of Onomastic Sciences, Université Laval, Quebec, Canada
 23-28 August IJCAI-87, Milan, Italy (*see page 224*)
 24-28 August 14th Annual International Systemic Workshop, University of Sydney, Australia (following meetings of the International Applied Linguistics Association).
 27-30 December Linguistic Society of America/American Association for Applied Linguistics/American Dialect Society, San Francisco, California

1989

- 20-26 August IJCAI-89, Detroit, Michigan.