BIBLIOGRAPHY OF STANFORD COMPUTER SCIENCE REPORTS 1963 - 1978

edited by

Connie J. Stanley

STAN-CS-78-680
NOVEMBER 1978

COMPUTER SCIENCE DEPARTMENT
School of Humanities and Sciences
STANFORD UNIVERSITY
Abstract:
This report lists, in chronological order, all reports published by the Stanford Computer Science Department since 1963. Each report is identified by Computer Science number, author's name, title, National Technical Information Service (NTIS) retrieval number*, date, and number of pages. Complete listings of Theses, Artificial Intelligence Memos, and Heuristic Programming Reports are given in the Appendix.

Also, for the first time, each report has been marked as to its availability for ordering and the cost if applicable.

*If this number is not given it means that the report is probably not available from NTIS.
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INTRODUCTION

In the Bibliography which follows, there is a listing for each Computer Science Department Report published as of the date of this writing. Each listing contains the following information:

- The report number(s)*
- The author(s)
- Whether or not the report is a thesis
- The “title” of the report
- The number of pages in the report,
- The month and year it was published
- The cost of the report (if any)

Special symbols preceding the report number indicate availability at this writing, as follows:

+ hard copy or microfiche,
Ø microfiche only,
* out-of-stock.

If there is no special symbol, then it is available in hard copy only.

All Computer Science Reports that are in stock may be requested from:

Stanford University
Computer Science Department
Polya Hall, Room 202
Stanford, California 94305 U.S.A.

However, Artificial Intelligence Memos (AIM-xxx) should be obtained directly from the Artificial Intelligence Laboratory. Their address is:

Artificial Intelligence Laboratory
Attn: Documentation Services
Stanford University
Stanford, California 94305 U.S.A.

Rising costs and restrictions on the use of research funds for printing reports have made it necessary to charge for reports at their replacement cost. By doing so, we will be able to reprint popular reports rather than simply declaring them “out of print”. Microfiche on the other hand is available free of charge.

Please note that when ordering, we would appreciate it greatly if you would NOT send any money with the order. Many of the older listings have only a few copies left, and we only want to charge you for what is actually sent. Please just send the request for the reports you want, and an invoice will be sent to you along with the reports.

Alternatively, reports that are out-of-stock at Stanford University may be ordered (for a nominal fee), in either hard copy or microfiche form, from:
If there is no NTIS number given, then they may or may not have the report. In requesting copies in this case, give them both the Stanford report number and the group number.

Reports that are also Ph.D. theses have been so marked and, if out-of-stock at Stanford University, may be ordered from:

University Microfilm
P. O. Box 1346
Ann Arbor, Michigan 48106

They are available from University Microfilm in both hardcopy and microfiche.

* There are up to three numbers given for each listing (i, ii, iii):

(i) the “Computer Science” number is on the left, with the form being “STAN-CS-yy-nnn”, where “yy” is the last two digits of the year of publication and “nnn” the report numbers;

(ii) any group number (i.e. AIM, TR, DOE, SLAC, etc.) is in the middle; and

(iii) a NTIS stock number (often beginning “AD...”) on the right, with the code “NAN” in that slot meaning “not at NTIS”.
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REPORTS PUBLISHED IN 1964


*STAN-CS-64-6, AD600164, R. W. Hockney, A Fast Direct Solution of Poisson's Fourier Analysis, 28 pages, April 1964.


*STAN-CS-64-9, AD604012, Charles Anderson, The QD-Algorithm as a Method for Finding the Roots of a Polynomial Equation When All Roots are Positive, 74 pages, June 1964.


REPORTS PUBLISHED IN 1965


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On the Approximation of Weak Solutions of Linear Parabolic Equations by a Class of Multi-step Difference Methods, 55 pages, December 1965.


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*STAN-CS-68-97, not at NTIS, W. F. Miller, Research in the Computer Science Department at Stanford University, 49 pages, April 1968.


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*STAN-(Z-68-120, PB182166, E. Satterthwaite, Mutant 0.5: An Experimental Programming Language, 60 pages, February 1968.
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STAN-CS-69-129, , not at NTIS, W. F. Miller, Research in the Computer Science Department, 82 pages, April 1969. Cost: $4.15


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*STAN-CS-69-142, , G. H. Golub and R. Underwood, Stationary Values of the Ratio of Quadratic Forms Subject to Linear Constraints, 22 pages, November 1969.

*STAN-CS-69-143, AD694464, M. A. Jenkins (Thesis), Three-Stage Variable-Shift for the Solution of Polynomial Equations with a Posteriori Error Bounds for the Zeros (has also been printed incorrectly as STAN-CS-69-138), 199 pages, August 1969.


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STAN-CS-70-175, ,AD713842, M. Malcolm, A Description and Subroutines for Computing Euclidean Inner Products on the IBM 360, 14 pages, October 1970. Cost: $1.85


*STAN-CS-70-185, ,TID22593, E. Nelson, Graph Program Simulation, 175 pages, October 1970.


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*STAN-CS-71-204, PB198510, D. Ingalls, FETE - a Fortran Execution Time Estimator, 12 pages, February 1971.


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*STAN-CS-7 I-228, PB203343, Linda Kaufman, Function Minimization and Automatic Therapeutic Control, 30 pages, July 1971.


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*STAN-CS-72-252, SU326 P30 14, M. A. Saunders, Large-Scale Linear Programming Using the Cholesky Factorization, 40 pages, January 1972.


*STAN-CS-72-262, PB209357, Staff, Bibliography, 36 pages, February 1972.


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*STAN-CS-72-268, , AD742348, V. Chvatal, Degrees and Matchings, 16 pages, March 1972.


STAN-CS-72-273, , PB209806, V. Chvatal and J. Sichler, Chromatic Automorphisms of Graphs, 12 pages, March 1972. Cost: 82.05

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@STAN-(X-74-414, AIM-232, AD780452, Bruce G. Baumgart, GEOMED: A Geometric Editor, April 1974.


*STAN-CS-74-441, AD-A000 284, Donald E. Knuth and Ronald W. Moore, An Analysis of Alpha-Beta Pruning, 64 pages, July 1974.


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+STAN-CS-75-501, AIM-261, AD-A016 810, O. Pettersen, Procedural Events as Software Interrupts, 8 pages, August 1975. Cost: 51.95


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+STAN-CS-75-519, AIM-266, AD-A019 641, R. Davis, B. Buchanan and E. Shortliffe, Production Rules as a Representation for a Knowledge-Based Consultation Program, 37 pages, November 1975. Cost: 52.75


*STAN-CS-75-526, AD-A020 848, Robert E. Tarjan, Graph Theory and Gaussian Elimination, 23 pages, November 1975.


*STAN-CS-75-532, Pat E. Jacobs (staff), Bibliography of Computer Science Reports, 77 pages, November 1975.


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*STAN-CS-76-541, Donald E. Knuth, Mathematics and Computer Science: Coping with Finiteness, 30 pages, March 1976.


*STAN-CS-76-544, B. Mont-Reynaud, Removing Trivial Assignments from Programs, 28 pages, March 1976.


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@STAN-CS-76-552, AIM-279, , Norihisa Suzuki (Thesis), Automatic Verification of Programs with Complex Data Structures, 194 pages, February 1976.


#STAN-CS-76-564, AIM-283, , Randall Davis (Thesis), Applications of Meta Level Knowledge to the Construction, Maintenance and Use of Large Knowledge Bases, 304 pages, July 1976.


@STAN-CS-76-566, , Margaret Wright (Thesis), Numerical Methods for Nonlinearly Constrained Optimization, 262 pages, November 1976.

@STAN-CS-76-567, AIM-284, , Rafael Finkel (Thesis), Constructing and Debugging Manipulator Programs, 171 pages, August 1976.


@STAN-CS-76-577, AIM-291, A044 713, Bruce Buchanan, Joshua Lederberg and John McCarthy, Three Reviews of J. Weizenbaum's Computer Power and Human Reason, 28 pages, November 1976.


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+STAN-CS-77-583, AD-A038 864, V. Chvatal, Determining the Stability Number of a Graph, 39 pages, February 1977. Cost: $2.80

+STAN-CS-77-584, AD-A038 865, Donald E. Knuth, Deletions That Preserve Randomness, 32 pages, February 1977. Cost: $2.60


@STAN-CS-77-590, AD-A038 868, Donald E. Knuth and Michael S. Paterson, Identities from Partition Involutions, 22 pages, February 1977.


+STAN-CS-77-596, HPP-77-5, , Mark J. Stefik and Nancy Martin, A Review of Knowledge Based Problem Solving as a Basis for a Genetics Experiment Designing System, 97 pages, April 1977. Cost: 84.40


*STAN-CS-77-598, ,AD-A040 486, Arne T. Jonassen and Donald E. Knuth, A Trivial Algorithm Whose Analysis Isn’t, 32 pages, April, 1977.


@STAN-CS-77-602, , , C. DeBoor and G. H. Golub, The Numerically Stable Reconstruction of a Jacobi Matrix from Spectral Data, 21 pages, April 1977.


@STAN-CS-77-604, , AD-A040 399, Tony F. C. Chan and Joseph Oliger, Control of the Dissipativity of Lax-Wendroff Type Methods for First Order Systems of Hyperbolic Equations, 45 pages, April 1977.


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+STAN-CS-78-664, , Peter Bjorstad and Jorge Nocedal, Analysis of a New Algorithm for One-Dimensional Minimization, 18 pages, May 1978. Cost: $2.20


+STAN-CS-78-669, , Paul K. Stockmeyer and F. Frances Yao, On the Optimality of Linear Merge, 11 pages, June 1978. Cost: $2.05

+STAN-CS-78-670, , Ronald L. Graham, Andrew C. Yao, and F. Frances Yao, Information Bounds are Weak in the Shortest Distance Problem, 39 pages, June 1978. Cost: $2.80


+STAN-CS-78-678, AIM-3 14, Derek C. Oppen, Reasoning About Recursively Defined Data Structures, 15 pages, November 1978. Cost: $2.15


APPENDIX A

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V. Tixier, Recursive Functions of Regular Expressions in Language Analysis, 146 pages, March 1967.


Barbara J. Huberman, A Program to Play Chess End Games, 168 pages, August 1968.


James Jay Horning, A Study of Grammatical Inference, 166 pages, August 1969.

M. A. Jenkins, Three-Stage Variable-Shift for the Solution of Polynomial Equations with a Posteriori Error Bounds for the Zeros, 199 pages, August 1969.


G. Falk, Computer Interpretation of Imperfect Line Data as a Three-Dimensional Scene, 187 pages, October 1970.

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Susan Graham, Precedence Languages and Bounded Right Context Languages, 192 pages, July 1971.


Francis Lockwood Morris, Correctness of Translations of Programming Languages – an Algebraic Approach, 125 pages, August 1972.

Gerald Jacob Agin, Representation and Description of Curved Objects, 125 pages, August 1972.
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V. Lesser, Dynamic Control Structures and Their Use in Emulation, 251 pages, August 1972.


Henry R. Bauer Ill, Subproblems of the m X n Sequencing Problem, 115 pages, November 1972.


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R. Sedgewick, Quicksort, 352 pages, May 1975.


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Sundaram Ganapathy, Reconstruction of Scenes Containing Polyhedra from Stereo Pair of Views, 204 pages, November 1975.


Norihsa Suzuki, Automatic Verification of Programs with Complex Data Structures, 194 pages, February 1976.


Randall Davis, Applications of Meta Level Knowledge to the Construction, Maintenance and Use of Large Knowledge Bases, 304 pages, July 1976.


Rafael Finkel, Constructing and Debugging Manipulator Programs, 171 pages, August 1976.


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Todd Jeffery Wagner, Hardware Verification, 102 pages, October 1977.

William Faught, Motivation and Intensionality in a computer Simulation Model, 104 pages, October 1977.


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*AIM-4, Horace Enea, Clock Function for LISP 1.5, 2 pages, August 1963.

*AIM-5, Horace Enea and Dean Wooldridge, Algebraic Simplification, 2 pages, August 1963.

*AIM-6, Dean Wooldridge, Non-printing Compiler, 2 pages, August 1963.

*AIM-7, John McCarthy, Programs With Common Sense, 7 pages, September 1963.

*AIM-8, John McCarthy, Storage Conventions in LISP 2, 5 pages, September 1963.

*AIM-9, C. M. Williams, Computing Estimates for the Number of Bisections of an NxN Checkerboard for N Even, 9 pages, December 1963.


*AIM-11, Dean Wooldridge, Jr., An Algebraic Simplify Program in LISP, 57 pages, December 1963.

*AIM-12, Gary Feldman, Documentation of the MacMahon Squares Problem, 4 pages, January 1964.


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* AIM-18, AD785048, Jan Hext, An Expression Input Routine for LISP, 5 pages, July 1964.

* AIM-19, , Jan Hext, Programming Languages and Translation, 14 pages, August 1964.


AIM-21, AD785040, R. W. Mitchell, LISP 2 Specifications Proposal, 12 pages, August 1964. Cost: $2.05

AIM-22, AD785041, Richard Russell, Kalah -- the Game and the Program, 13 pages, September 1964. Cost: $2.05

AIM-23, AD785049, Richard Russell, improvements to the Kalah Program, 12 pages, September 1964. Cost: $2.05

AIM-24, AD785050, John McCarthy, A Formal Description of a Subset of ALGOL, 43 pages, September 1964. Cost: $2.90


* AIM-29, AD785055, Charles M. Williams, Isolation of important Features of a Multitone Picture, 9 pages, January 1965.


AIM-33, AD785032, Barbara Huberman, The Advice Taker and GPS, 8 pages, June 1965. Cost: $1.95
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AIM-34, AD785069, Peter Carah, A Television Camera Interface for the PDP-1, 8 pages, June 1965. Cost: $1.95


AIM-36, AD785065, James Painter, Utilization of a TV Camera on the PDP-1, 6 pages, September 1965. Cost: $1.85


AIM-48, Donald M. Kaplan, Correctness of a Compiler for Algol-like Programs, 46 pages, July 1967. Cost: $3.00

AIM-49, Georgia Sutherland, DENDRAL -- a Computer Program for Generating and Filtering Chemical Structures, 34 pages, February 1967. Cost: $2.65
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*AIM-61, , , Takayasu Ito, Notes on Theory of Computation and Pattern Recognition, 144 pages, May 1968.


AIM-63, , , Donald M. Kaplan, Regular Expressions and the Equivalence of Programs, 42 pages, July 1968. Cost: $2.90

*AIM-64, , , Zohar Manna, Formalization of Properties of Programs, 18 pages, July 1968.


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*AIM-71, AD677520, Pierre Vicens, Preprocessing for Speech Analysis, 33 pages, October 1968.


*AIM-73, AD678878, John McCarthy and Patrick Hayes, Some Philosophical Problems From the Standpoint of Artificial Intelligence, 51 pages, November 1968.


*AIM-80, AD685612, Georgia Sutherland, Heuristic Dendral: a Family of LISP Programs, 46 pages, March 1969.


AIM-93.1, , AD693106, Jerome Feldman, Some Decidability Results on Grammatical Inference and Complexity, 31 pages, August 1969, revised May 1970. Cost: $2.55


*AIM-95, , AD694971, Zohar Manna, The Correctness of Non-deterministic Programs, 44 pages, August 1969.


*AIM-97, , AD694972, Kenneth Mark Colby and David Canfield Smith, Dialogues Between Humans and an Artificial Belief System, 28 pages, August 1969.
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*AIM-102, Donald A. Waterman, Generalization Learning for Automating the Learning of Heuristics, 74 pages, July 1969.


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*AIM-116, , , Kenneth Mark Colby, Mind and Brain, Again, 10 pages, March 1970.


*AIM-120, , , Kenneth Mark Colby and David Canfield Smith, Computer as Catalyst in the Treatment of Nonspeaking Autistic Children, 32 pages, April 1970.


*AIM-123, , , Bruce G. Buchanan and Thomas E. Headrick, Some Speculation About Artificial Intelligence and Legal Reasoning, 54 pages, May 1970.


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*AIM-150, Robert W. Floyd, Toward Interactive Design of Correct Programs, 12 pages, September 1971.


Artificial Intelligence Memos

Appendix B


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Artificial Intelligence Memos

Appendix B


AIM-194, STAN-CS-73-347, PB221170/4, Kenneth Mark Colby and Franklin Dennis Hilf, Multidimensional Analysis in Evaluating a Simulation of Paranoid Thought, 10 pages, May 1973. Cost: $2.00


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@AIM-221, STAN-CS-74-4 47, AD787631/1WC, Luigia Aiello, Mario Aiello and Richard Weyhrauch, The Semantics of PASCAL in LCF, 78 pages, October 1974.


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@AIM-228, STAN-CS-74-409, AD776233/9WC, Lester Earnest (editor), FINAL REPORT: The First Ten Years of Artificial Intelligence Research at Stanford, 118 pages, July 1974.


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@AIM-237, STAN-CS-74-436, Yorick Wilks, Natural Language Understanding Systems Within the AI Paradigm -- A Survey and Some Comparisons, 40 pages, December 1974.


@AIM-241, STAN-CS-74-446, AD786723/7WC, Luigia Aiello and Richard W. Weyhrauch, LCFsmall: an Implementation of LCF, 45 pages, August 1974. Cost: $2.95


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@AIM-244, STAN-CS-74-457, not at NTIS, Kenneth Mark Colby, Ten Criticisms of PARRY, 7 pages, September 1974.


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@AIM-252, STAN-(X-74-466, ADA002246, Lester Earnest (editor), Recent Research in Artificial Intelligence, Heuristic Programming, and Network Protocols, 74 pages, July 1974.

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There are six informal groups within the Heuristic Programming Project.

Knowledge-Based Consultation Systems (MYCIN)
MOLGEN
Protein-Crystallography
Hydroid
DENDRAL
Meta-DENDRAL

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