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PROJECT MAC

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Bibliography on the Semantics of Programming Languages

by

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## Bibliography on the Semantics of Programming Languages

The references cited in this bibliography form a comprehensive collection of literature on the use of formal interpreters, translation to formal languages, and axiomatic methods in the definition of programming language semantics. The bibliography was developed beginning with the extensive bibliography of Reference 37. All the references to schemata and graph oriented approaches in that bibliography have been removed as they will be covered in a separate bibliography. The bibliography was brought up to date with references to work done since 1969 and also with references to formal results based on definitional interpreters. That is, such areas as the equivalence of two interpretation techniques and proofs of the correctness of algorithms are covered. There are also references to standard basic textbooks covering important foundation material.

1. A. V. Aho and J. D. Ullman. The theory of languages. Math. Systems Theory 2, 1968, 97-125.
2. K. Alber and P. Oliva. Translation of PL/I Into Abstract Syntax. Technical Report TR 25.086, IBM Laboratory, Vienna, June 1968.
3. K. Alber, P. Oliva, and G. Urschler. Concrete Syntax of PL/I. Technical Report TR 25.084, IBM Laboratory, Vienna, June 1968.
4. C. D. Allen, E. A. Ashcroft and J. J. Florentin. Inferences from Formal Language Definitions. Working paper presented at ACM Symposium on Programming Language Definitions, San Francisco, Calif., August 1969.
5. C. D. Allen, Derivation of axiomatic definitions of programming languages from algorithmic definitions. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 15-26.
6. E. A. Ashcroft. Program correctness of numerical algorithms. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 51-57.
7. J. Backus. Programming language semantics and closed applicative languages. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 71-86.

8. D. W. Barron, J. N. Buxton, D. F. Harthley, E. Nixon, and C. Strachey. The main features of CPL. Comp. J. 6, 1963, 134-143.
9. S. K. Basu. On computation in programming languages. ICC Bulletin 6, 1966, 1-26.
10. D. Beech. On the definitional method of standard PL/I. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 87-94.
11. H. Bekic and K. Walk. Formalization of storage properties. Symposium Semantics of Algorithmic Languages (E. Engeler, ed.), Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 28-61.
12. D. M. Berry. Introduction to Oregano. Proceedings of a Symposium on Data Structures in Programming Languages, SIGPLAN Notices 6, 2 (February 1971), 171-190.
13. D. M. Berry. The equivalence of models of tasking. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 170-190.
14. D. G. Bobrow (ed.). Symbol manipulation languages and techniques. Proceedings IFIP Working Conference 1966, North-Holland Publishing Co., Amsterdam, 1968.
15. D. G. Bobrow and B. Wegbreit. A model and stack implementation of multiple environments. Comm. of the ACM 16, 10 (October 1973), 591-603.
16. C. Bohm, CUCH as a formal and description language. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed.), North-Holland Publishing Co., Amsterdam, 1966, 179-197.
17. C. Bohm and W. Gross. Introduction to the CUCH. Automata Theory (E. R. Caianiello, ed.), Academic Press, New York and London, 1966, 35-65.
18. C. Bohm and G. Jacopini. Flow diagrams, Turing machines, and languages with only two formation rules. Comm. of the ACM 9, 1966, 366-372
19. W. H. Burge. The evaluation, classification, and interpretation of expressions. Proceedings of the ACM 19th National Conference, ACM, New York, 1964, A1.4.1 - A1.4.22.
20. R. M. Burstall. Formal description of program structure and semantics in first order logic. Machine Intelligence 5 (B. Meltzer and D. Michie, eds.), Edinburgh University Press, 1969, 79-98.
21. R. M. Burstall. Proving properties of programs by structural induction. Computer Journal 12, 1 (February 1969), 41-68.

22. R. M. Burstall. Semantics of assignment. Machine Intelligence 2, (E. Dale and D. Michie, eds.), Oliver and Boyd, Edinburgh, 1967, 3-20.
23. A. Caracciolo di Forino. String processing languages and generalized Markov algorithms. Symbol Manipulation Languages and Techniques, Proceedings of the IFIP Working Conference 1966 (D. G. Bobrow, ed.), North-Holland Publishing Co., Amsterdam, 1968, 191-206.
24. A. Caracciolo di Forino and R. Rebaudo. On a Formal Definition of SIMULA by Means of an Extended Markov Algorithm. Unpublished report.
25. A. Caracciolo di Forino and N. Wolkenstein. On a Class of Programming Languages for Symbol Manipulation Based on Extended Markov Algorithms. Centro Studi Calcolatrici Elettroniche, Report 21, Pisa, Italy, 1963.
26. C. Christensen. Examples of symbol manipulation in the AMBIT programming language. Proceedings of the ACM 20<sup>th</sup> National Conference, 1965, 247-261.
27. A. Church. The calculi of lambda-conversion. Annals of Math. Studies, 6, Princeton University Press, Princeton, New Jersey, 1951.
28. K. Cohen and J. H. Wegstein. AXLE, an axiomatic language for string transformation. Comm. of the ACM 8, 1965, 657-661.
29. M. Clint and C. A. R. Hoare. Program proving: jumps and functions. Acta Informatica 1, 1972, 214-224.
30. D. C. Cooper. Mathematical proofs about computer programs. Machine Intelligence 1 (N. L. Collins and D. Michie, eds.), Oliver and Boyd, Edinburgh, 1966, 17-28.
31. D. C. Cooper. Bohm and Jacopini's reduction of flow charts. (A letter to the editor), Comm. of the ACM 10, 1967, 463.
32. H. B. Curry and R. Feys. Combinatory Logic. North-Holland Publishing Co., Amsterdam 1958.
33. O.-J. Dahl, E. W. Dijkstra, and C. A. R. Hoare. Structured Programming. Academic Press, London and New York, 1972.
34. O.-J. Dahl and C. A. R. Hoare. Hierarchical program structures. Structured Programming, Academic Press, London and New York, 1972, 175-220.
35. O.-J. Dahl, B. Myrhaug, and K. Nygaard. The Simula 67 Common Base Language. Norwegian Computing Centre, Forskningsveien 1B, Oslo, 1968.
36. O.-J. Dahl and K. Nygaard. SIMULA -- an ALGOL-based simulation language. Comm. of the ACM 9, 9 (September 1966), 671-678.

37. J. W. de Bakker. Semantics of programming languages. Advances in Information Systems Science 2 (S. T. Tou, ed.), Plenum Press, New York, 1969.
38. J. W. de Bakker. Formal definition of programming languages. Mathematical Center Tracts 16, Mathematisch Centrum, Amsterdam, 1967.
39. J. W. de Bakker. Axiomatics of Simple Assignment Statements. Report MR 94, Mathematisch Centrum, Amsterdam, June 1968.
40. J. W. de Bakker. A property of linear conditionals. Symposium Semantics of Algorithmic Languages (E. Engeler, ed.), Lecture Notes in Mathematics, 188, Springer-Verlag, 1971, 23-27.
41. J. W. de Bakker. Axiom systems for simple assignment statements. Symposium Semantics of Algorithmic Languages (E. Engeler, ed.), Lecture Notes in Mathematics, 188, Springer-Verlag, 1971, 1-22.
42. J. B. Dennis. On the design and specification of a common base language. Proceedings of the Symposium on Computers and Automata, Polytechnic Press of the Polytechnic Institute of Brooklyn, New York, 1971, 47-74. Also Technical Report MAC-TR-101, Project MAC, MIT, Cambridge, Mass., 1972, 46 pp.
43. J. B. Dennis. First version of a data flow procedure language. Symposium on Programming, University of Paris, April 1974.
44. E. W. Dijkstra. Notes on structured programming. Structured Programming, Academic Press, London and New York, 1972, 1-82.
45. J. J. Donovan and H. F. Ledgard. Canonic Systems and Their Applications to Programming Languages. Memo MAC-M-347, Project MAC, MIT, Cambridge, Mass., April 1967.
46. S. Eilenberg and C. C. Elgot. Iteration and Recursion. IBM Research Report RC-2148, IBM, Yorktown Heights, N. Y., July 1968.
47. C. C. Elgot. Machine species and their computation languages. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed), North-Holland Publishing Co., Amsterdam, 1966, 160-179.
48. C. C. Elgot and A. Robinson. Random access, stored program machines, an approach to programming languages. J. of the ACM 11, 1964, 365-399.
49. E. Engeler (ed.). Symposium on semantics of algorithmic languages. Lecture Notes in Mathematics 188, Springer-Verlag, 1971.
50. E. Engeler. Algorithmic properties of structures. Math. Systems Theory 1, 1967, 183-195.
51. A. Evans, Jr. The lambda calculus and its relation to programming languages. Proceedings of ACM National Conference, ACM, 1972, 714-716.

52. A. Evans, Jr. PAL -- a language designed for teaching programming linguistics. Proceedings of the ACM 23rd National Conference, 1968, 395-403.
53. A. Evans, Jr. Syntax Analysis by a Production Language. Ph.D Thesis, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, 1965.
54. I. Fang. FOLDS, A Declarative Formal Language Definition System. Stanford Computer Science Report CS-72-329, Stanford University, Stanford, California, 1972.
55. J. Feldman and D. Gries. Translator writing systems. Comm. of the ACM 11, 1968, 77-113.
56. A. E. Fischer and M. J. Fischer. Mode modules as representations of domains -- preliminary report. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 139-143.
57. M. J. Fischer. Lambda calculus schemata. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 104-109.
58. M. Fleck and E. Neuhold. Formal Definition of the PL/I Compile Time Facilities. Technical Report TR25.080, IBM Laboratory, Vienna, June 1968.
59. R. W. Floyd. Assigning meanings to programs. Mathematical Aspects of Computer Science, Proceedings of Symposia in Applied Mathematics 19 (J. T. Schwartz, ed.), American Mathematical Society, Providence, R. I., 1967, 19-32.
60. W. Henhagl and C. B. Jones. The Block Concept and Some Possible Implementations With Proofs of Equivalence. Technical Report TR 25.104, IBM Laboratory, Vienna, 1970.
61. C. Hewitt, P. Bishop, I. Greif, B. Smith, T. Matson and R. Steiger. Actor induction and meta-evaluation. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 153-168.
62. C. A. R. Hoare. The Axiomatic Method. The National Computing Centre, Manchester, England, 1968.
63. C. A. R. Hoare. Record handling. Programming Languages (F. Genuys, ed.), Academic Press, 1968, 291-347.
64. C. A. R. Hoare. An axiomatic basis for computer programming. Comm. of the ACM 12, 10 (October 1969), 576-583.
65. C. A. R. Hoare. Proof of a program: FIND. Comm. of the ACM 14, 1 (January 1971), 39-45.
66. C. A. R. Hoare. Procedures and parameters: an axiomatic approach. Symposium on Semantics of Algorithmic Languages (E. Engeler, ed.), Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 102-116.

67. C. A. R. Hoare. Proof of correctness of data representations. Acta Informatica 1, 1972, 271-281.
68. C. A. R. Hoare. Notes on data structuring. Structured Programming, Academic Press, London and New York, 1972, 83-174.
69. C. A. R. Hoare and N. Wirth. An Axiomatic Definition of the Programming Language Pascal. Computer Science Group Report, Eidgenossische Technische Hochschule, Zurich, November 1972.
70. S. Igarashi. On the logical schemes of algorithms. Information Processing in Japan 3, 1963, 12-18.
71. S. Igarashi. A formalization of the description of languages and the related problems in a gentzen-type formal system. Research Notes in the Research Association of Applied Geometry, Third Series, 80, 1964.
72. S. Igarashi. An Axiomatic Approach to the Equivalence Problems of Algorithms with Applications. Ph.D Thesis, University of Tokyo, 1964. Also Report of the Computer Center, University of Tokyo 1, 1968.
73. S. Igarashi. On the equivalence of programs represented by ALGOL-like statements. Report of the Computer Center, University of Tokyo 1, 1968, 103-118.
74. S. Igarashi. Semantics of ALGOL-like statements. Symposium on Semantics of Algorithmic Languages, Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 117-177.
75. R. Iitturiaga. Contributions to Mechanical Mathematics. Ph.D Thesis, Carnegie-Mellon University, Pittsburgh, Pennsylvania, May 1967.
76. J. B. Johnston. The contour model of block structured processes. Proceedings of a Symposium on Data Structures in Programming Languages, SIGPLAN Notices 6, 2 (February 1971), 55-82.
77. C. B. Jones and P. Lucas. Proving correctness of implementation techniques. Symposium on Semantics of Algorithmic Languages, Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 178-211.
78. C. B. Jones. Formal development of correct algorithms: an example based on Earley's recogniser. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 150-169.
79. D. M. Kaplan. Correctness of a Compiler for ALGOL-Like Programs. Artificial Intelligence Memo 48, Stanford University, Stanford, Calif., July 1967.
80. D. M. Kaplan. Some completeness results in the mathematical theory of computation. J. of the ACM 15, 1968, 124-134.
81. D. Knuth. Examples of formal semantics. Symposium on Semantics of Algorithmic Languages (E. Engeler, ed.), Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 212-235.

82. D. E. Knuth. Algorithm and program, information and data. (A letter to the editor), Comm. of the ACM 9, 1966, 654.
83. D. E. Knuth. Semantics of context free languages. Math. Systems Theory 2, 1968, 127-145.
84. P. J. Landin. The mechanical evaluation of expressions. Computer Journal 6, 1964, 308-320.
85. P. J. Landin. A correspondence between ALGOL-60 and Church's lambda notation. Comm. of the ACM 8, 1965, 89-101, 158-165.
86. P. J. Landin. A  $\lambda$ -calculus approach. Advances in Programming and Non-Numerical Computation (L. Fox, ed.), Pergamon Press, New York, 1966, 97-141.
87. P. J. Landin. A formal description of ALGOL-60. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed.), North-Holland Publishing Co., Amsterdam, 1966, 266-294.
88. P. J. Landin. The next 700 programming languages. Comm. of the ACM 9, 1966, 157-166.
89. P. Lauer. Abstract Syntax and Interpretation of ALGOL-60 Programs. Laboratory Report LR25.6.001, IBM Laboratory, Vienna, April 1968.
90. P. Lauer. Concrete Representation of Abstract ALGOL-60 Programs. Laboratory Report LR25.6.002, IBM Laboratory, Vienna, May 1968.
91. P. Lauer. Consistent Formal Theories of the Semantics of Programming Languages. Technical Report TR25.121, IBM Laboratory, Vienna, 1971.
92. J. A. N. Lee. The definition and validation of the radix sorting technique. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972).
93. C. H. Lewis and B. K. Rosen. Recursively defined data types, Part 1. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 125-138.
94. B. H. Liskov and S. N. Zilles. Programming with abstract data types. ACM SIGPLAN Symposium on Very High Level Languages, Santa Monica, Calif., March 1974.
95. G. Leoni. On Formal Definition of COBOL Semantics. Unpublished report.
96. P. Lucas and K. Walk. On the formal description of PL/I. Annual Review of Automatic Programming 6, Part 3, Pergamon Press, 1970.



97. P. Lucas. Two Constructive Realizations of the Block Concept and Their Equivalence. Technical Report 25.085, IBM Laboratory, Vienna, June 1968.
98. P. Lucas, K. Alber, K. Bandat, H. Bekic, P. Oliva, K. Walk and G. Zeisel. Informal Introduction to the Abstract Syntax and Interpretation of PL/I. Technical Report TR25.083, IBM Laboratory, Vienna, June 1968.
99. P. Lucas, P. Lauer, and H. Stigleitner. Method and Notation for the Formal Definition of Programming Languages. Technical Report TR25.087, IBM Laboratory, Vienna, June 1968.
100. A. A. Markov. The Theory of Algorithms. Office of Technical Services, U. S. Department of Commerce, Washington, D.C., 1962.
101. J. McCarthy. Recursive functions of symbolic expressions and their computation by machine. Comm. of the ACM 3, 4 (April 1960), 184-195.
102. J. McCarthy. LISP 1.5 Programmer's Manual. Computation Center and Research Laboratory of Electronics, M.I.T., Cambridge, Mass., August 1962.
103. J. McCarthy. Computer programs for checking mathematical proofs. Recursive Function Theory, Proceedings of Symposia in Pure Mathematics 5, American Mathematical Society, Providence, R. I., 1962, 219-227.
104. J. McCarthy. A basis for a mathematical theory of computation. Computer Programming and Formal Systems (P. Braffort and D. Hirschberg, eds.), North-Holland Publishing Co., Amsterdam, 1963, 33-69.
105. J. McCarthy. Towards a mathematical science of computation. Proceedings of the IFIP Congress 1962, North-Holland Publishing Co., Amsterdam, 1963, 21-28.
106. J. McCarthy. Problems in the theory of computation. Proceedings of the IFIP Congress 1965 1, Spartan Books, Washington, D.C., 1965, 219-222.
107. J. McCarthy. A formal description of a subset of ALGOL. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed.), North-Holland Publishing Co., Amsterdam, 1966, 1-12.
108. J. McCarthy and J. Painter. Correctness of a compiler for arithmetic expressions. Mathematical Aspects of Computer Science, Proceedings of Symposia in Applied Mathematics 19 (J. T. Schwartz, ed.), American Mathematical Society, Providence, R.I., 1967, 33-41.
109. C. McGowan. The correctness of a modified SECD machine. Second ACM Symposium on Theory of Computing, ACM, 1970, 149-157.
110. C. McGowan. An inductive proof technique for interpreter equivalence. Formal Semantics of Programming Languages (R. Rusin, ed.), Prentice-Hall, 1972.

110. C. McGowan and P. Wegner. The equivalence of sequential and associative information structure models. Proceedings of a Symposium on Data Structures in Programming Languages, SIGPLAN Notices 6, 2 (February 1971), 191-216.
111. C. McGowan. The contour model lambda calculus machine. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 110-115.
112. C. McGowan. The "most recent" error: its causes and correction. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 191-202.
113. E. Mendelson. Introduction to Mathematical Logic. D. van Nostrand Co., Princeton, New Jersey, 1964.
114. R. Milner. Implementation and applications of Scott's logic for computable functions. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 1 (January 1972), 1-6.
115. F. L. Morris. Advice on structuring compilers and proving them correct. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 144-152.
116. J. H. Morris, Jr. Lambda Calculus Models of Programming Languages. Technical Report TR-57, Project MAC, M.I.T., Cambridge, Mass., 1968.
117. J. H. Morris, Jr. Types are not sets. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 120-124.
118. J. H. Morris, Jr. Protection in programming languages. Comm. of the ACM 16, 1 (January 1973), 15-21.
119. J. H. Morris, Jr. A bonus from Van Wijngaarden's device. To be published in Comm. of the ACM.
120. R. Narasimhan. Programming languages and computers: a unified metatheory. Advances in Computers 1 (F. L. Alt and M. Rubinoff, eds.), Academic Press, New York and London, 1967, 189-244.
121. P. Naur, ed. Revised report on the algorithmic language ALGOL 60. Comm. of the ACM 6, 1 (January 1963), 1-17.
122. P. Naur. Proof of algorithms by general snapshots. BIT 6, 1966, 310-317.
123. E. J. Neuhold. The formal description of programming languages. IBM Systems Journal 10, 2 (1971), 87-112.
124. J. Painter. Semantic Correctness of a Compiler for an ALGOL-Like Language. Artificial Intelligence Memo 44, Stanford University, Stanford, California, March 1967.

125. C. V. Ramamoorthy. Discrete Markov analysis of computer programs. Proceedings of the ACM 20th National Conference, ACM, New York, 1965, 386-391.
126. M. V. Rennie. Theory of procedures, I, Simple Conditionals (Abstract). J. Symbolic Logic 32, 1967, 577.
127. J. C. Reynolds. GEDANKEN -- A simple typeless language based on the principle of completeness and the reference concept. Comm. of the ACM 13, 5 (May 1970), 308-319.
128. A. L. Rosenberg. Transitions in extendible arrays. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 218-225.
129. P. C. Rosenbloom. The Elements of Mathematical Logic. Dover Publications, New York, 1950.
130. R. Rustin (ed.). Formal Semantics of Programming Languages. Courant Computer Science Symposium 4, Prentice-Hall, Englewood Cliffs, New Jersey, 1972.
131. D. Scott. Outline of a mathematical theory of computation. Proceedings of the Fourth Annual Princeton Conference on Information Sciences and Systems, Princeton University, Princeton, New Jersey, 1970, 169-176.
132. D. Scott. Lattice theory, data types and semantics. Formal Semantics of Programming Languages (R. Rustin, ed.), Prentice-Hall, 1972.
133. D. Scott. Mathematical concepts in programming language semantics. Proceedings of the AFIPS Conference 40, 1972, 225-234.
134. D. Scott. The lattice of flow diagrams. Symposium on Semantics of Algorithmic Languages, Lecture Notes in Mathematics 188, Springer-Verlag, 1971, 311-366.
135. D. Scott and C. Strachey. Towards a mathematical semantics for computer languages. Proceedings of a Symposium on Computers and Automata, Polytechnic Press Polytechnic Institute of Brooklyn, New York, 1971.
136. T. Standish. A Data Definition Facility for Programming Languages. Doctoral Thesis, Carnegie Institute of Technology, Pittsburgh, Pa., 1967.
137. T. B. Steel, Jr., ed. Formal Language Description Languages for Computer Programming. Proceedings of the IFIP Working Conference 1964, North-Holland Publishing Co., Amsterdam, 1966.
138. C. Strachey. Towards a formal semantics. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed.), North-Holland Publishing Co., Amsterdam, 1966, 198-220.

139. C. Strachey (ed.). GPL Working Papers. University of London Institute of Computer Science, 1966.
140. C. Strachey. Fundamental concepts in programming languages. Privately circulated paper, 1968.
141. R. D. Tennent. Mathematical semantics of SNOBOL4. Conference Record of the ACM Symposium on Principles of Programming Languages, ACM, New York, 1973, 95-107.
142. K. Walk. Modelling of storage properties of higher level languages. Proceedings of a Symposium on Data Structures in Programming Languages, SIGPLAN Notices 6, 2 (February 1971), 146-170.
143. K. Walk, K. Alber, K. Bandat, H. Bekic, G. Chroust, V. Kudielka, P. Oliva, and G. Zeisel. Abstract Syntax and Interpretation of PL/I, Technical Report TR25.082, IBM Laboratory, Vienna, June 1968.
144. B. Wegbreit. Studies in Extensible Programming Languages. Ph.D Thesis, Harvard University, May 1970.
145. B. Wegbreit. The Treatment of Data Types in ELI. Report ESD-TR-71-341 to Deputy for Command and Management Systems HQ Electronic Systems Division (AFSC) L. G. Hanscom Field, Bedford, Mass. from Harvard University, 1971.
146. P. Wegner. The Vienna definition language. Computing Surveys 4, 1 (March 1972), 5-63.
147. P. Wegner. Data structure models for programming languages. Proceedings of a Symposium on Data Structures in Programming Languages, SIGPLAN Notices 6, 2 (February 1971), 1-54.
148. P. Wegner. Operational semantics of programming languages. Proceedings of an ACM Conference on Proving Assertions About Programs, SIGPLAN Notices 7, 2 (January 1972), 128-141.
149. R. Weyhrauch and R. Milner. Program semantics and correctness in a mechanized logic. First USA-Japan Computer Conference, October 1972.
150. N. Wirth. A generalization of ALGOL. Comm. of the ACM 6, 1963, 547-554.
151. N. Wirth and H. Weber. EULER: a generalization of ALGOL and its formal definition. Comm. of the ACM 9, 1966, 13-23, 89-99.
152. A. van Wijngaarden. Generalized ALGOL. Symbolic Languages in Data Processing, Proceedings of the ICC Symposium, Rome 1962, Gordon and Breach, New York, 1962, 409-419.  
Also Annual Review in Automatic Programming 3 (R. Goodman, ed.), Pergamon Press, New York, 1963, 17-26.

153. A. van Wijngaarden. Recursive definition of syntax and semantics. Formal Language Description Languages for Computer Programming, Proceedings of the IFIP Working Conference 1964 (T. B. Steel, Jr., ed), North-Holland Publishing Co., Amsterdam, 1966, 13-24.
154. J. M. Wozencraft and A. Evans. Notes on Programming Linguistics. MIT, Cambridge, Mass., February 1971.
155. H. Zemanek. Semiotics and programming languages. Comm. of the ACM 9, 1966, 139-143.