COMPUTER AIDED DESIGN OF DIGITAL SYSTEMS A BIBLIOGRAPHY VOLUME II 1975-76

W.M. VANCLEEMPUT

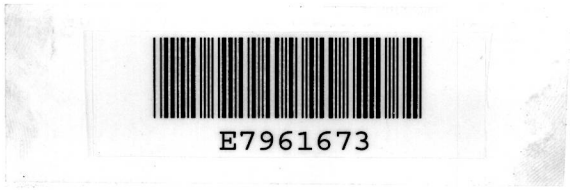
COMPUTER SCIENCE PRESS, INC.

COMPUTER AIDED DESIGN OF DIGITAL SYSTEMS A BIBLIOGRAPHY VOLUME II 1975-76

W.M. VANCLEEMPUT

DIGITAL SYSTEMS LABORATORY

STANFORD UNIVERSITY



COMPUTER SCIENCE PRESS, INC.

DIGITAL SYSTEM DESIGN SERIES

Arthur D. Friedman, Series Editor

COMPUTER AIDED DESIGN OF DIGITAL SYSTEMS — A BIBLIOGRAPHY

by W.M. vanCleemput

COMPUTER AIDED DESIGN OF DIGITAL SYSTEMS — A BIBLIOGRAPHY VOLUME II 1975-76

By W.M. vanCleemput

DIGITAL SYSTEM DESIGN AUTOMATION: LANGUAGES, SIMULATION AND DATA BASE

Edited by Melvin A. Breuer

LOGICAL DESIGN OF DIGITAL SYSTEMS

by Arthur D. Friedman

THEORY AND DESIGN OF SWITCHING CIRCUITS

by Arthur D. Friedman and Premachandran R. Menon

DIAGNOSIS AND RELIABLE DESIGN OF DIGITAL SYSTEMS

by Melvin A. Breuer and Arthur D. Friedman

COMPUTER SCIENCE PRESS, INC.
9125 Fall River Lane
Potomac, Maryland 20854

PREFACE

In the second volume of this bibliography, publications in the field of computer-aided design of digital systems for the period January 1975 - May 1976 are listed. Furthermore, coverage of the bibliography has been expanded backwards for certain journals. A list of complete coverage of the various journals and conference proceedings is included in the Appendices.

An attempt has been made to cover all major publications (books, papers in journals and published conference proceedings, research reports) in the main areas of computer-aided design of digital systems (automated logic design, fault diagnosis and test generation, simulation and circuit layout).

A number of references on the mathematical and computer science aspects of computer-aided design have been included in Section J. Furthermore, some references on computer-aided circuit analysis and computer-aided manufacturing of digital systems have been selected on the basis of their usefulness to designers of digital systems. In these fields the bibliography is not intended to be complete but it contains a number of citations that are representative of the area.

This work consists of four major sections. The first section contains the citations, classified under 10 major subject headings:

A. General References on Design Automation
B. Automated Logic Design
C. Logic and Fault Simulation
D. Fault Diagnosis and Fault Test Generation
E. Layout of Printed and Integrated Circuits
F. Computer-aided Circuit Analysis
G. Automated Documentation
H. Computer-aided Manufacturing of Digital Systems
I. Software Design Automation
J. Mathematical and Computer Science Aids for Digital Design Automation

Within every subheading, citations are classified alphabetically by author, and chronologically for every author. Every citation is numbered and both the

author and subject indices refer to the citations in this section.

The numbering scheme used in the first volume has been followed, albeit with a few modifications, in this second volume. Within every subsection the numbering of the first volume has been continued, e.g. where B2.587 was the last citation in Volume 1, B2.588 will be the first citation in Volume 2 for Section B2.

The second section is the author index. This section allows quick access to all publications in the bibliography by an individual author. This author index is cumulative over the first and second volumes of the bibliography. For an indication of the volume in which a given citation number appears, please refer to Appendix 4.

The third section is the subject and keyword index, organized alphabetically by subject. This index is also cumulative over the first and second volumes of the bibliography. To find out in which volume a given citation number is listed, please consult Appendix 4.

The fourth section is a research report index, which allows access to citations by their source of origin. For the purpose of this index, dissertations are treated as research reports.

The appendices contain a list of frequently used abbreviations and a list of journals and conference proceedings that were covered systematically.

W. M. vanCleemput

September, 1976.

How to Use this Bibliography

The citations in this bibliography are classified under 10 major headings.

A. General References on Design Automation

B. Automated Logic Design

C. Logic and Fault Simulation

D. Fault Diagnosis and Fault Test Generation

E. Layout of Printed and Integrated Circuits

F. Computer-aided Circuit Analysis

G. Automated Documentation

H. Computer-aided Manufacturing of Digital Systems

I. Software Design Automation

J. Mathematical and Computer Science Aids for Digital Design Automation

Each of these subject headings is in turn broken up into several subheadings.

An important publication may be listed more than once if it clearly belongs to more than one subject area. For example the following citation will be listed under A1: General References on Design Automation - Books.

12. Breuer, M. A. (ed.) "Digital System Design Automation: Languages, Simulation and Data Base," Woodland Hills, California: Computer Science Press, 1975.

Because of the importance of this work every chapter of this book will be listed separately under the appropriate heading. For example, Chapter 2 of this book will be listed under B1: Automated Logic Design - Books, Surveys, Bibliographies.

73. Dietmeyer, D. L. and Duley, J. R. "Register Transfer Languages and their Translation," Chapter 2 of M. A. Breuer, "Digital System Design Automation: Languages, Simulation and Data Base," Woodland Hills, California: Computer Science Press, 1975.

Multiple listings of the same citation have been avoided as much as possible and only important references belonging clearly under more than one heading have been listed more than once.

The subject and keyword index provides easy access to all citations that belong to more than one subject area.

For many research reports, the NTIS (National Technical Information Service) accession number is given if the report is available through NTIS. Most doctoral

dissertations are available from Xerox University Microfilms and when known, the order number for these dissertations is given.

If the user is interested in a particular subject area such as Printed Circuit Layout, he may look up the subject heading that seems most appropriate.

However, some of the subheadings such as B2, Logic Design Algorithms and D2, Fault Diagnosis Techniques, are likely to contain too many citations for efficiently locating the relevant references. The subject and keyword index in Section 3 is the key to the full resources of this bibliography. For every citation, this index contains entries to significant keyword and subject classifications.

The author index allows the user quick access to all the publications by the same author, whether or not he is the primary author.

The research report index lists research reports and these by the source of origin. This may be helpful in locating a particular item if only the affiliation of the author(s) is known.

Appendix 1 contains a list of the most frequently used abbreviations. A list of major journals that were covered systematically is given in Appendix 2. A similar list is provided for conference proceedings in Appendix 3. The Citation Number Index is contained in Appendix 4. This index allows the user to determine in which volume a particular citation is listed.

TABLE OF CONTENTS

SECTION 1

CITATIONS

A. GENERAL REFERENCES ON DESIGN AUTOMATION.

A1. Books

12. Breuer,M.A. "Digital System Design Automation: Languages, Simulation and Data Base," Woodland Hills, California: Computer Science Press, 1975.

A2. Surveys.

10. Anderson,R.E. "Survey of Test Generation Techniques," Proc. WESCON 75, San Francisco, Sept. 1975, pp. 13/1.1-13/1.7.

11. Anderson,R.E. "Digital-Testing Glossary Reflects Industry Usage," Electronics, vol. 49, no. 11, pp. 119-121, May 1976.

12. Barbacci,M.R. "A Comparison of Register Transfer Languages for Describing Computers and Digital Systems," IEEE Trans. Computers, vol. C-24, no. 2, pp. 137-156, Feb. 1975.

13. Bauer,F.L. "Software Engineering," Proc. Int. Federation Information Processing 1971, vol. 1, Ljubljana, Yugoslavia, Aug. 1971, pp. 530-538.

14. Carroll,B.D. "Multiple Faults in Combinational Logic Networks - A Survey," Auburn Univ., Dept. of El. Eng., Tech. Rept., April 1975, 15 pp.

15. Chang,H.Y. and Chappell,S.G. "Deductive Techniques for Simulating Logic Circuits," IEEE Computer, vol. 8, no. 3, pp. 52-59, March 1975.

16. Hightower,D.W. "The Interconnection Problem: A Tutorial," IEEE Computer, vol. 7, no. 4, pp. 18-32, April 1974.

17. Huang,J.C. "An Approach to Program Testing," ACM Computing Surveys, vol. 7, no. 4, pp. 113-128, Sept. 1975.

18. Igarashi,S.; London,R.L. and Luckham,D.C. "Program Verification I: A Logical Basis and its Implementation," Acta Informatica, vol. 4, no. 2, pp. 145-182, 1975.

19. Kennedy,J.E. "A Survey of Automated Computer Program Verification Tools," Aerospace Corp., El Segundo, Calif., Rept. TOR-0075(5112)-1, Aug. 1974.

20. Kime,C.R. "Fault Tolerant Computing: An Introduction and a Perspective," IEEE Trans. Computers, vol. C-24, no. 5, pp. 457-460, May 1975.

A3. Bibliographies.

31. Grooms,D.W. "Switching Circuits (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1970-Oct. 1974, Feb. 1975, 116 pp.; (NTIS PS-75/128/9GA).

32. Grooms,D.W. "Computer Software Maintenance (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1970-April 1975, April 1975, 50 pp.; (NTIS PS-75/355/8GA).

33. Grooms,D,W, "Structured Programming (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1970-June 1975, June 1975, 56 pp.; (NTIS PS-75/501/7GA).

34. Grooms,D.W. "Computer Software Reliability (A Bibliography with Abstracts)," Nat. Tech. Inf, Service, Springfield, Rept. for 1970-June 1975, June 1975, 103 pp.; (NTIS PS-75/486/1GA).

35. Grooms,D.W. "Automatic Programming (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1964-June 1975, July 1975, 45 pp.; (NTIS PS-75/594/2GA).

36. Grooms,D.W. "Automata Theory (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1964-Sept. 1975, Sept. 1975, 164 pp.; (NTIS PS-75/707/0GA).

37. Grooms,D.W. "Logic Design (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1964-Oct. 1975, Nov. 1975, 152 pp.; (NTIS PS-75/029).

38. Grooms,D.W. "Shift Registers (A Bibliography with Abstracts)," Nat. Tech. Inf. Service, Springfield, Rept. for 1964-Dec. 1975, Dec. 1975, 84 pp.; (NTIS PS-75/879/7GA).

39. Guttag,J. "An Annotated Bibliography on Computer Program Engineering," Univ. of Toronto, Computer Systems Research Group, Tech. Rept. CSRG-54, April 1975.

40. Jones,L.H.; Carvin,K.; Hauser,J.; Hermann,P.; Pherson,F.; Reksten,J. and VanName,P. "An Annotated Bibliography on Microprogramming," IEEE Computer Group Repository, R75-66, 1975,17 pp.

41. Jones,L.H. and Carvin,K. "Contributed Articles - An Annotated Bibliography on Microprogramming II," IEEE Computer Group Repository, R75-67, 1975, 12 pp.

42. Jones,L.H. and Zeichner,M.B. " An Annotated Bibliography on Microprogramming III," IEEE Computer Group Repository, R75-68, 1975, 12 pp.

43. Potts,J. " Computers Graphics Bibliography," D.W. Taylor Naval Ship Research and Developmemt Center, Bethesda, Md. Rept. no. DTNSRDC-4602, Jan. 1975, 119 pp.

44. Pierce,A.R. "Bibliography on Algorithms for Shortest Path, Shortest Spanning Tree, and Related Circuit Routing Problems," SIGDA Newsletter, vol. 4, no. 2, pp. 29-37, June 1974.

A4. Other General References.

61. Arneberg,P.A and Aas,E.J. "Design Automation in Norway," Proc. 12th Design Automation Conf., Boston, June 1975, pp. 251-256.

62. Bennington,B.J. and Rattray,C.M. "A General Examination of Engineering Design," Proc. 5th Design Automation Workshop, Washington,D.C., July 1968, 17 pp.

63. Breuer,M.A. "Curriculum on Design Automation at the University of Southern California," Proc. ACM Nat. Conf., San Diego, Calif., Nov. 1974, pp. 422-425.

64. Ciampi,P.; Simoncini,L.; Tomljanovich,M. and Valle,G. "State of the Art and Trends in Design Automation in Italy," Proc. 12th Design Automation Conf., Boston, June 1975, pp. 23-31.

65. Collmeyer,A.J. "Developments in Design Automation," IEEE Computer, vol. 7, no. 1, pp. 9-11, Jan. 1974.

66. Herbst,R.T. "Designing Equipment with Computers," Bell Labs Record, vol. 44, pp. 129-134, April 1966.

67. Hess,F.A. and Egel,D.K. "Distributed Computing in Engineering Design Processes," Proc. USA-Japan Design Automation Symp., Tokyo, Japan, August 1975, pp. 1-7.

68. Hoglund,I.; Fransson,L.; Almen,A.; Magnhagen,B.; Kjelkerud,E. and Thessen,O. "Design Automation of Electronics in Sweden,", Proc. 12th Design Automation Conf., Boston, June 1975, pp. 15-22.

69. Hoyer,A. and Schwarzer "Der Entwurfprozess der Hardware von Datenverarbeitsanlagen und seine Unterstuetzung durch Programme und Gerate," (The Hardware Design Proces and its Support by Programs and Devices), Entwurfautomatisierung fur Datenverarbeitsanlagen und deren Komponenten, IEEE Germany, Karlsruhe, Germany, pp. 23-29, Sept. 1974.

70. Jacquart,R.; Regnier,P.; Valette,F.R. and Foisseau,J. "Current Trends in the Development of Integrated General Purpose CAD Systems,", Proc. 12th Design Automation Conf., Boston, June 1975, pp. 180-188.

71. Katz,J.E. and Jacobsen,V.L. "Introduction to LICAD (Lawrence Laboratory Computer Aided Design)," Univ. of California at Berkeley, Lawrence Berkeley Lab., Rept. CONF-721001-37, Oct. 1974, 7 pp.

72. Landau,I.Y. "On the Automation of Digital Computer Design," Automation & Remote Control ,vol.25, no. 11, pp. 1428-1433, 1964.