FACULTY POSITIONS IN COMPUTER SCIENCE
UNIVERSITY OF MINNESOTA

The University of Minnesota invites applications for faculty positions as assistant (or associate) professors of Computer Science available January 1, 1976. Applicants should have the Ph.D. degree and be qualified to teach and perform research. Applicants with specialties in operating systems, database systems, or operating systems with emphasis on data base management aspects are encouraged to apply. Applicants with theoretical as well as practical experience are particularly encouraged to apply.

Forward resume together with names of at least three references to W. R. Franta, Chairman Faculty Search Committee, Dept. of Computer Science, 143 Science Space, 100 Union St. S.E., Minneapolis, Minnesota 55455. An equal opportunity/affirmative action employer.

INDIANA UNIVERSITY
Computer Science Department

Applications are invited for two or more tenure-track faculty positions. Applicants should have a Ph.D. in computer science or a closely related field, or the Ph.D. plus equivalent experience in these fields. We are seeking applicants who demonstrate research capabilities in information systems, artificial intelligence, operating systems and hardware. We shall also consider applicants in other areas. Resumes should be sent not later than February 10, 1978, to:

Paul W. Purdom, Jr., Acting Chairman Computer Science Department 101 Lindley Hall Bloomington, IN 47401

The department offers the AB, MS, and PhD degrees. Indiana University is an equal opportunity/affirmative action employer.

KANSAS STATE UNIVERSITY—Assistantships: KSU is seeking masters and PhD students with strong CS backgrounds. Current areas of research are network operating systems, database systems, programming languages, software engineering, mini and microcomputers, and picture processing. The Department has a network of minicomputers and a microprocessor laboratory. The University has an IBM 370/158. Teaching and research assistantships are available for Spring ’78 and Fall ’78. Apply to Dr. Paul Fisher, Head, Department of Computer Science, Kansas State University, Manhattan, KS 66506. KSU is an equal opportunity/affirmative action employer.

UNIVERSITY OF CALIFORNIA
SANTA BARBARA, CALIFORNIA 93106

Openings for temporary positions as Lecturers and/or Research Associates are anticipated beginning Fall 1978 in Computational Complexity, Formal Languages, Semantics and Verification Systems, Numerical Analysis, Programming Languages, and other areas of Computer Science. A PhD degree with potential for excellence in research and teaching are required. Candidates should send vita and names of at least three references to Computer Science Committee, Department of Mathematics, University of California, Santa Barbara, CA 93106, by February 15, 1978. An Equal Opportunity/ Affirmative Action Employer.

FACULTY POSITION IN COMPUTER SCIENCE
The University of Alabama in Huntsville welcomes applications for a tenure track position on the Computer Science faculty, available as early as March 1, 1978 but no later than September 1, 1978. The position is at the rank of Assistant or Associate Professor, depending on experience and qualifications. Deadline for applications is January 15, 1978.

A PhD in computer science or allied areas is required. Academic and/or computer-related industrial experience is preferred. Responsibilities will include teaching and thesis advise in one or more of the following areas: software engineering, artificial intelligence, operating systems, microcomputer and its Applications, Computer Architecture, Data Base Management, and Software Engineering.

Send resume and transcripts along with names and addresses of at least three references to:

Dr. Pei Hsia, Chairman Computer Science Program The University of Alabama in Huntsville P.O. Box 1247 Huntsville, Alabama 35807

The University of Alabama in Huntsville is an Affirmative Action/Equal Opportunity Institution.

Department of Electrical Engineering has immediate opening at the Assistant Professor rank for a person with strong background in Computer Software and Hardware. In addition to teaching Electrical and Computer Engineering courses, the candidate should have demonstrated ability for developing new Computer Software courses and in research and development activities for the digital Systems Laboratory. PhD or equivalent required, industrial and teaching experience desirable. Send resume to Chairperson, Department of Electrical Engineering, California State University, Los Angeles, CA 90032. Application deadline is February 28, 1978. An Affirmative Action Title IX/Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA
SANTA BARBARA, CALIFORNIA 93106

Openings for regular (tenure track) positions are anticipated beginning Fall 1978 in Programming Languages, Artificial Intelligence, Numerical Analysis, and other areas of Computer Science. A PhD degree and excellence in research and teaching are required. Salary and rank depend upon qualifications. Candidates should send vita and the names of at least four references to Computer Science Committee, Department of Mathematics, University of California, Santa Barbara, CA 93106, by January 15, 1978. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSORSHIPS OF COMPUTER SCIENCE
Massachusetts Institute of Technology

The M.I.T. Department of Electrical Engineering and Computer Science has several positions available, starting September, 1978 or earlier. Applications are invited from candidates with strong backgrounds in areas including applications of specialization within computer science will be considered. The Department has special interest in candidates in the hardware and computer systems areas. Research would probably be performed within the Laboratory for Computer Science (formerly Project MAC), the Artificial Intelligence Laboratory, or the Research Laboratory for Electronics.

Applications should include a curriculum vitae, and names and addresses of three or more references; non-U.S. citizens should include an explanation of visa status. Additional material describing the applicant's work, such as papers or technical reports, and a one-paragraph statement of future research plans would be helpful.

Send applications to:

Professor Albert R. Meyer Chairman, Computer Science Search Committee M.I.T., 545 Technology Square, Room 515 Cambridge, MA 02139

M.I.T. is an equal opportunity/affirmative action employer and actively solicits applications from women and minority group candidates.

Assistant Professor: The University of Iowa is opening assistant professor level in the Division of Information Engineering. Candidates would teach undergraduate and graduate level courses in the Electrical and Computer Engineering Department. Conduct research in the following areas: computer architecture, software and hardware; computer communications; computation theory; mini and microcomputer systems; operating systems. There are modern facilities within the Division for research in these areas and close research ties exist with the College of Medicine and with Physics and Mathematics. Send resume by January 15 to: Robert Arbaeister, Chairman, Division of Information Engineering, The University of Iowa, Iowa City, Iowa 52242. The University of Iowa is an equal opportunity employer.

THE UNIVERSITY OF ALABAMA IN BIRMINGHAM

The Department of Computer and Information Sciences welcomes applications for one, or possibly two, faculty positions at the Assistant or Associate Professor level, beginning in September 1978. Applicants should hold a doctoral degree in Computer Science, Information Sciences or Information Systems. Teaching and research interests should be in the mainstream of computer and information sciences.

Send application to:

Dr. Anthony Barnard, Chairman Computer and Information Sciences Dept. 119 Rust Building The University of Alabama in Birmingham Birmingham, Alabama 35294

UAB is an Equal Opportunity/Affirmative Action Employer.

December 1977
COMPUTER ARCHITECTURE
Position in Computer Reliability

We seek a person capable of carrying out individual research and analysis in the design of reliable digital systems utilizing very large scale integration componentry. The work will involve techniques for testing, diagnosis, fault detection, and system recovery, with a goal of developing advanced computer architectures, processor design techniques, and/or computer components for enhanced reliability. Candidate should have a Ph.D. in Electrical Engineering, or equivalent, and at least three years' relevant experience.

Please send resume to:
Janet Porrett
Spery Research Center
Sudbury, MA 01776
An Equal Opportunity Employer

Head, Department of Electrical Engineering,
Stevens Institute of Technology, Hoboken, NJ.
Applications are invited for the position of Head of the Department of Electrical Engineering. The appointee must have an earned degree in electrical engineering (concentration in computer science/digital systems) and demonstrated ability in teaching and research. Administrative, industrial, or governmental experience is desirable. Stevans is an equal employment/affirmative action employer. Applications and resumes of qualified individuals should be sent to: Dr. Alfred C. Gilmore, Jr., Chairman, Search Committee, Department of Electrical Engineering, Stevens Institute of Technology, Castle Point Station, Hoboken, NJ 07030.

Computer Hardware and Software Engineering:
The Department of Electrical Engineering at the Technion-Israel Institute of Technology invites applications for faculty positions in the following areas: Theory and Practice of Computer Architecture and Logical Design, Programming Systems and Software Engineering, Language Design and Implementation and Operating Systems. These are regular faculty positions with rank depending on qualifications. Visiting positions are also available. Please send resume and list of publications to: Prof. Raphael M. Deitel, Dean, Dept. of E.E., Technion-Israel Institute of Technology, Haifa, Israel.

FACULTY POSITIONS IN
COMPUTING SCIENCE

Applications are invited for two positions at the Assistant Professor level, starting January or September, 1978. Candidates should have a Ph.D. in Computer Science. Preferred areas of interest are (but not limited to) software engineering, automata, and theory of algorithms and microprocessors. Send resume to: W. M. Lively, Department of Industrial Engineering, Texas A&M University, College Station, TX 77843.

EQUAL EMPLOYMENT OPPORTUNITY
THROUGH AFFIRMATIVE ACTION

Electrical Engineering: Assistant Professor to start on or before September 1, 1978. Entry level position for person with teaching and research interest and capabilities in one or more of the following: digital electronics, mini/microcomputer systems, distributed systems, microprocessor applications, or computer architecture design. Applicants must hold the Ph.D. or equivalent in Electrical Engineering or Computer Science. Application deadline January 31, 1978. Send resume and the names of two references to: Chairman of the Search Committee, Electrical Engineering Department, The University of Akron, Akron, OH 44325. An equal opportunity, affirmative action employer.

WAYNE STATE UNIVERSITY
Assistant, Associate, or Full Professor

The expanding Computer Science department at Wayne State University has several academic positions currently open for Assistant, Associate, or Full Professor. A Ph.D. degree is required. Appointments begin with the Fall Quarter, September 1978. Applications are welcome from those interested in teaching graduate and undergraduate courses and pursuing research in any of the following areas: Computer Science: Artificial Intelligence, Computer Architecture, Data Base Management, Discrete and Continuous Simulation, Operating Systems, Information Processors, Pattern Recognition, Programming Languages, Systems Analysis.

Send letter of interest and resume to:
Professor Seymour J. Wolfson
Computer Science Section
Wayne State University
Detroit, MI 48202
or call (313) 577-2477.

Wayne State University is an affirmative action/ equal opportunity employer.

PROGRAMMER: PDP-11 REAL-TIME

One+ years experience with RSX-11M at system level.
Three+ years experience with MACRO-11 and Fortran.
Responsibilities include executive modification and maintenance, device driver writing, real-time, and database applications. Ability to work closely with hardware engineers.
Salary commensurate with ability and experience. Excellent fringe benefit package, pleasant suburban Philadelphia location. Send resume in confidence to Bridgeport Tektronix, 200 Prevision Road., Horsham, PA 19044.

An equal opportunity employer.

Faculty Position—Computer Science: The Department of Electrical and Computer Engineering of the University of Cincinnati invites applications for the position of assistant professor to be filled by September 1, 1978. Applicants must have the Ph.D. by the time of appointment. Candidates must have specialized in computer hardware, software, or in related digital system applications including signal and image processing. Send resume to Prof. Richard H. Engellnann, Head, Department of Electrical and Computer Engineering, Mail Loc. 430, University of Cincinnati, OH 45221. The University of Cincinnati is an equal opportunity employer.

Tenure Track Position: Applications are invited from Computer Scientists with background in research and teaching. Ph.D. (as of 9/78) required. The successful applicant must be able to guide undergraduate majors in the Computer Science curriculum. Strong research opportunities exist in Num. Anal., OR, Computer Graphics, and Vision; however, overall excellence is preferable to specific expertise. Send a complete resume including references to:

Richard C. Roberts, Faculty Search Committee
Department of Mathematics
University of Maryland Baltimore County
Baltimore, MD 21228

An Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA
SANTA BARBARA

The Department of Electrical Engineering and Computer Science has regular faculty openings in computer science. Individuals with strong research and teaching qualifications in any area of computer science will be seriously considered. The Department desires to fill one of the openings with an individual specializing in computer architecture. The position will involve major responsibilities in the continuing development of the Department's academic programs in computer science, in the development and conduct of extramurally-funded research programs, and in graduate teaching and direction of doctoral research. Academic rank and salary dependent on qualifications. Interested persons should send a resume and names of at least four references to Professor E. G. Coffman, Jr., Department of Electrical Engineering and Computer Science, University of California, Santa Barbara, CA 93106, by 15 February 1978. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

Department of Computing Science

University of Alberta

Applications are invited for a faculty appointment at the Assistant Professor level, effective July 1, 1978. Minimum starting salary: $18,377.00 for 12 months. Applicants should have a Ph.D. in Computer Science or equivalent and be strongly committed to teaching and curriculum development as well as research in computer architecture and systems organization. Research interests may extend to Computer Networks, Microprogramming, Microcomputer Applications, Graphics Systems. Departmental laboratory facilities contain a variety of mini and microcomputers including PDP 11/45, PDP 11/60 and Nanodac QA-1, as well as access to an Amdahl 470. Research funding and operational support are also available. Send resume and names of at least 3 references to: John Tartar, Chairman, Department of Computing Science University of Alberta

Edmonton, Alberta, Canada T6G2H1

SOUTHERN ILLINOIS UNIVERSITY
AT CARBONDALE

Applications are invited for assistant professor and associate professor faculty positions in the Computer Science Department starting August 15, 1978. Candidates should have a broad competence in Computer Science and a specialty in at least one of the following fields: operating systems, programming languages, computer architecture, information systems. Full participation in the department's undergraduate and graduate programs along with excellence in teaching and research is expected. In the case of the associate professor position, an established research record is required. A Ph.D. will be required as of date of employment.

Applicants should send a resume by February 25, 1978 to:

Faculty Recruitment Committee
Department of Computer Science
Southern Illinois University

Carbondale, Illinois 62901

SIUC is an Equal Opportunity/Affirmative Action Employer.
University of Massachusetts, Amherst invites applicants for regular faculty positions at the Assistant Professor level or above for persons with teaching ability and research potential, or accomplishments within one or more of the following areas: computer architecture and design, mini/microcomputer systems, fault-tolerant computers, LSI applications, computer aided digital system design, computer graphics, software engineering. Positions available starting January 15, 1978. Send resume and list of references to: Professor Walter H. Kohler, Dept. of Electrical and Computer Engineering, University of Massachusetts, Amherst, MA 01003.

AN EQUAL OPPORTUNITY/AFFIRMATIVE
ACTION EMPLOYER.

CASE WESTERN RESERVE UNIVERSITY
CASE INSTITUTE OF TECHNOLOGY

Director—Andrew R. Jennings Computing Center:
Nominations and applications are sought for the position of Director of the Andrew R. Jennings Computing Center. Duties will include ensuring adequate computing services for faculty, staff, and students by supervising the center; administering the operations of CWRUNET, the distributive computing network presently being developed; and acquiring needed computer equipment.

The position carries a 12-month faculty appointment in the appropriate department. Qualifications include a Ph.D. in Computer Science, Computer Engineering or some field in science or engineering with substantial experience in computer use. Some administrative experience in operating a computer facility is also required.

Inquiries and applications should be addressed to:

Prof. Glenn M. Frye, Jr.
Chairman, Search Advisory Committee
Rockefeller Building
Case Western Reserve University
Cleveland, Ohio 44106

Application deadline is February 1, 1978.

Case Western Reserve University is an equal opportunity/affirmative action employer.

California State University, Northridge—Department of Computer Science: Due to vigorous growth in student enrollment, faculty positions continue to be available in Computer Science. Positions are available for Spring '78 semester (beginning in late January) as well as for the '78-79 academic year. Areas include: Data Base Systems, Graphics, Artificial Intelligence, Operating Systems, System Architecture, Qualifications: Ph.D., industrial experience desirable. Send resume to Philip Gilbert, Chairman, Department of Computer Science, California State University, Northridge, California 91330. To ensure consideration for positions beginning in Fall 1978, application should be sent on or before February 28, 1978. Equal opportunity and affirmative action employer.

Computer Professionals: Looking for a new challenge? Feel under-paid? Maybe a change of company or location could benefit you. My firm represents many client companies. In addition we have professional affiliation with other top recruiters in virtually every market-place in the USA. All fees are company paid and your inquiry is held in confidence. Send your resume to: COREY ASSOCIATES, 105 Wolf Road, Albany, N.Y., 12205.

Recently published books and new periodicals may be submitted for review to the Book Reviews Editor:

Dr. Francis P. Mathur
Professor and Computer Science Coordinator
Mathematics Department
California State Polytechnic University
3801 West Temple Avenue
Pomona, CA 91768
Telephone: (714) 598-4421

(Note: publications reviewed in this section are not available from the IEEE Computer Society. Please order directly from the publisher.)

B77-43 Computers and Management for Business—Douglas A. Colbert
(New York: Petrocelli Books, 1975, 423 pp., $13.95)

This is another in an already large group of introductory texts designed to introduce undergraduate business students to computer systems. It parallels the traditional pattern long established for such works: (1) the historical development of today's systems, (2) business data processing, (3) numbering systems and encoding schemes, (4) an overview of hardware equipment and available software (including operating systems), and (5) various applications and interactions of computer systems and business management.

Introducing the material is a brief look at both business and scientific uses of the computer, emphasizing the usefulness and power of contemporary systems. In Chapter 2, the treatment of the evolution of computers and their hardware is brief, accurate, and well-explained—perhaps one of the best detailed overviews in print. Chapter 3 introduces business data processing by means of "live data" examples of modern applications. This approach is, to the business student, certainly more relevant than the laborious discussions on outdated manual and tab card data processing procedures usually included in an introductory text.

Two of the chapters briefly introduce number systems (base 10 and 2). Several pages of illustrations contain the tube (!) and core patterns for various symbols encoded in BCD and EBCDIC. The section on binary arithmetic is overly brief and misleading: the material is acceptable for business majors with no intention of plumbing the internal workings of a system, but not for majors in computer science. Chapter 8 deals primarily with the CPU and hardware-software interaction. An excellent diagram of a typical modern system is included, sufficiently simplified for the beginner but comprehensive enough to give the reader a feel for the complexity of modern systems.

Chapters 9 and 10 offer a good description of the program design process and an in-depth, step-by-step account of the program execution process. The reader is led from problem definition through flowcharting, with various examples of source code.

No coverage, however, is given to the now-widely-available report writing packages, which reduce the programming effort in many business applications.

Peripherals—tape, disk, and "state-of-the-art" (slightly outdated) devices—are covered in the next three chapters. Much detail is given to the buffering process, record layouts on the devices, and the hardware itself.

Operating systems are introduced in Chapter 14 with a detailed description of JCL/jobstream/software interaction. However, the treatment of timesharing is too brief, and very little information is given on data communications.

Chapter 15 extends the depth and scope of the text by providing 37 topical summaries, grouped into nine broad categories and cross-referenced by the preceding chapters. The