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Objective

Computer science Ph.D. with extensive experience seeking consulting opportunities, especially during May through August.

Education

Massachusetts Institute of Technology *Sept. 1983–August 1989*
Ph.D. in Electrical Engineering and Computer Science.
Thesis Title: Efficient Interconnection Schemes for VLSI and Parallel Computation
Advanced courses in subjects including algorithms, artificial intelligence, computational complexity, computer architecture, cryptography, parallel computation, programming languages, and VLSI design
Minor: Engineering and Business Decision Making
GPA 5.0/5.0

Washington University, St. Louis, Missouri *August 1979–May 1983*
B.S. & M.S. in Systems Science and Mathematics
B.S. in Computer Science
A.B. in Mathematics
Summa Cum Laude (GPA 3.99/4.0)

Selected Computing/Programming Experience

- DEC and SUN workstations since 1985 and 1989, respectively.
- Apple and IBM PCs (with MSDOS, Windows) since 1985 and 1994, respectively.
- UNIX (several varieties) and X Windows since 1985 including extensive experience with:
 - X Windows customization through .Xdefaults, .twmrc, etc.
 - shell scripts in csh, sh, and tcsh
 - the Awk language for information retrieval, data processing, and report generation
 - sc spreadsheet program

I have written scripts for such purposes as:

- extracting labeled columns from tabular files
 - plotting of histograms and computation of statistics for data sets
 - a system for deleting files that maintains backup copies that may later be purged
 - inspecting a spreadsheet of student grades and emailing each student a copy of his grade record for the semester
 - inspecting the printer queue and providing notice when one's own jobs become active or complete
- C programming since 1986, including:
 - projects as large as a program of approximately 10,000 lines for routing wires on VLSI chips
 - Later work with ANSI and GNU C, such as coding of an efficient algorithm to find all longest common subsequences (<http://www.cs.luc.edu/~rig/lcs>)

- Familiarity with some specifics of C++ as well as the general principles of object-oriented programming through use of object-oriented features of SMALLTALK and LISP (including implementation of a program under the Common Lisp Object System to perform simulation and transformation of systolic systems)
- Experienced user of network services such as email, newsgroups, ftp, telnet, secure shell, and WWW since 1983 (later for technologies that surfaced later). Have created extensive web pages for personal and course information. Have helped debug Apache configuration for departmental web server. Have set up several web services using CGI, shell scripts, and Perl, including:
 - A system to transform a simple specification of course schedule information into a customized graphical view and listings sorted by various criteria (<http://www.cs.luc.edu/~rig/schedules>)
 - A system for assigning advisors to students, allowing a student to look up his advisor, and allowing an advisor to look up his advisees.
 - An online system for students to fill out course approval forms and for advisors to review them.
- Extensive programming in several LISP dialects since 1982.
- Extensive use of Emacs editor since 1983, including customizing the editor behavior using Emacs-Lisp.
- Programming parallel computers in extensions of C, LISP, and FORTRAN since 1987.
- Programming in FORTRAN, BASIC, PASCAL, PL/I, PROLOG, and SNOBOL, each beginning between 1976 and 1982. Sufficient education and experience with the general principles of programming languages to pick up any new language quickly.
- Scientific word processing since 1984 using T_EX, L^AT_EX, and B_IB_TE_X, including programming of complicated customizations such as sorting of reference numbers in citations and listing of page numbers where each reference is cited.
- Occasional use of Macsyma and Mathematica symbolic algebra packages since 1987.
- Have supervised students performing programming projects for research, homework, or graduate program administration. (One such project also provided me with some Oracle Database experience.)

Principal Honors

- George Corcoran Award for Outstanding Contributions to Electrical Engr. Education (U. of MD)
- Fannie and John Hertz Foundation Graduate Fellowship
- Valedictorian of Washington University Engineering School
- Langsdorf Fellowship (four-year full-tuition engineering fellowship at Washington U.)
- Ranked 124th in 1981 Putnam Exam (national collegiate mathematics competitions)
- Ross R. Middlemiss Award for an outstanding graduating mathematics major (Washington U.)
- Systems Science & Math. Dept. Outstanding Professional Achievement Award (Washington U.)
- Society for Industrial and Applied Mathematics Award (Washington U. student chapter)
- Antoinette Francis Dames Award for productive scholarship (Washington University)
- Elected to Tau Beta Pi, Phi Beta Kappa, and Pi Mu Epsilon Honor Societies
- National Merit Scholar
- High School Valedictorian
- Honors Group in Westinghouse Science Talent Search

Employment

Loyola University of Chicago	
Associate Professor of Computer Science	<i>August 1996–present</i>
Bar Ilan University	
Visiting Associate Professor of Computer Science	<i>Spring 2001</i>
University of Maryland	
Assistant Professor of Electrical Engineering	<i>August 1989–August 1996</i>
National Technological University	
Consultant	<i>Spring 1990, Fall 1991, and Spring 1996</i>
Hughes & Luce	
Consultant	<i>July 1987</i>
Massachusetts Institute of Technology	
Teaching Assistant	<i>June 1987</i>
AT&T Bell Laboratories	
Member of Technical Staff	<i>Summer 1986</i>
Johns Hopkins University Applied Physics Laboratory	
Technical Aide	<i>Summer 1982 and Summer 1980</i>
Lockheed Missiles and Space Company	
Technical Summer Hire	<i>Summer 1981</i>
Washington University Systems Science and Mathematics Department	
Instructional Assistant	<i>January 1983, January 1982, Fall 1981, Fall 1980</i>
Research Assistant	<i>Spring 1980</i>

Principal Research Accomplishments

- 30 journal and conference papers on design of parallel computers and algorithms for routing messages on networks, VLSI computer-aided design, computational biology applications, and numerical solution of systems of equations.
- A patent on a method of performing multiscan correlation on radar reports to separate real tracks from false alarms.
- 4 peer-reviewed grants totaling \$255,470.
- 29 speaking invitations in addition to conference presentations.

Principal Teaching and Advising Accomplishments

- Taught many different courses at undergraduate and graduate levels in the areas of algorithms, VLSI design, computer architecture, discrete mathematics, and artificial intelligence.
- Supervised four students to Ph.D. completion in addition to supervision and advising of many M.S. and B.S. students.

Professional Service

- Member of National Science Foundation panel to review grant proposals, 2002. Also reviewer of several other NSF proposals.
- Member of program committees for International Conference on Parallel Processing (ICPP) 1998 and International Parallel Processing Symposium (IPPS) 1996. Also chaired sessions at ICPP 1997 and IASTED PDCS 1996 conferences.
- Member of Society for Industrial and Applied Mathematics (SIAM).
 President of Washington University student chapter 1981–82.
 Vice-President of Washington University student chapter 1980–1981.
- Member of Association for Computing Machinery (ACM), ACM Special interest group on Algorithms and Computation Theory (SIGACT), Institute for Electrical and Electronics Engineers (IEEE), and IEEE Computer Society.
- Referee for over 30 journal papers. Also reviewer of many papers for conferences.

References (Others available upon request)

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