

Bruce R. Littlefield

Alternative Solutions

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RESEARCH AND CONSULTING

Supercomputing, computer networking and network protocols, distributed processing and cluster computing, systems integration, multiprocessor systems, computer simulations, system administration, and technical writing.

EDUCATION

M.S. in Electrical Engineering, 1993, University of Maine

Thesis Title: "The Design and Implementation of a Simulator for Four Microprogrammable State Machines"

B.S. in Computer Engineering with Highest Distinction, 1987, University of Maine

First Computer Engineering degree awarded by the University of Maine.

EXPERIENCE

University of Maine

Electrical and Computer Engineering

System Manager/Lecturer in Computer Engineering

2000 - Present

Taught introductory and advanced Linux systems administration courses and upper-level network engineering course. Evaluated, planned and designed software, hardware, and network infrastructure for the ECE department. Developed computer and network management automation scripts and procedures. Supervised student employees helping with hardware and software development and maintenance, systems and network administration, user support services, and web development. Coordinated network and technology issues with other University departments and the System Wide Services wide-area networking group. Consulted for other University departments and colleges on technology and integration issues. College of Engineering representative to the University of Maine Information Technology Advisory Council.

Researcher

2003 - 2005

Evaluated and debugged hardware and software for a large cluster supercomputers. Collaborated with systems administrators in systems design and maintenance of the supercomputers.

Manager of Computing and Network Services

1990 - 2000

Designed and maintained an integrated computing and network infrastructure for the Electrical and Computer Engineering Department, with overall responsibility for technology planning, integration, implementation, systems administration management, user support services and training, web site management, and policy and procedure development. Coordinated network and technology issues with other University departments and the System Wide Services wide-area networking group. Consulted for other University departments and colleges on technology and integration issues.

Teaching Associate in Computer Engineering

1987-1990

Responsible for the Logic Systems and Digital Design Labs. Designed and built digital test stations, developed laboratory exercises, supervised student assistants, maintained documentation, and evaluated, installed, and maintained equipment and software. Acted as Systems Administrator for the HP Unix workstation. Assisted faculty in course planning and laboratory instruction.

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Computer Consulting

Principal

1972-Present

Operated a computer and business consulting company in Central Maine. Developed information management solutions for clients including the Maine Division of Community Services, Practical Progressive Consultants, Inc., the Maine Democratic Party, craft cooperatives, wholesale and retail operations, and medical offices. Co-authored a number of textbooks on MATLAB data analysis and visualization software. Co-authored the Mastering MATLAB Toolbox – a collection of MATLAB functions and utilities designed to illustrate good programming techniques.

EXPERIENCE (CONT.)

Other Consulting Firms

Computer Systems Consultant

Computer systems consultant for a number of small consulting firms in the greater Boston area including Management Matrix, Inc. in Lowell, Systems Design and Implementation, Inc. in Arlington, and Veridat, Inc. in Waltham. Developed a large data base manipulation system, performed a field survey of law enforcement communication systems, assisted in the development, textbook compilation, and presentation of short courses for law enforcement. Clients included the Massachusetts Chiefs of Police Association, Suffolk County District Attorney's Office, the Massachusetts Department of Probation, Arthur D. Little, Inc., Brockton District Court, Western Union, and the U.S. Navy. Analyzed client systems and developed, updated, documented, and maintained business software for clients of a computer service bureau. Applications included payables, receivables, payroll, inventory management, sales analysis, route analysis, insurance, and food service.

Computer Consulting

1966-1972

HONORS

Valedictorian of the Class of 1987 at the University of Maine.

Member of IEEE and the Phi Kappa Phi, Tau Beta Phi, and Eta Kappa Nu honor societies.

Recipient of the Phi Kappa Phi Freshman Achievement Award.

Recipient of the Tau Beta Pi Outstanding Sophomore Engineer Award.

University of Maine College of Engineering Leila C. Lowell Award for Outstanding Service.

PUBLICATIONS

Mastering MATLAB 7, Prentice Hall, 2005. ISBN #0-13-143018-1 (with Dr. Duane Hanselman)

Mastering MATLAB 6, A Comprehensive Tutorial and Reference, Prentice Hall, 2001. ISBN #0-13-019468-9 (with Dr. Duane Hanselman)

Mastering MATLAB 5, A Comprehensive Tutorial and Reference, Prentice Hall, 1998. ISBN #0-13-858366-8 (with Dr. Duane Hanselman)

The Student Edition of MATLAB User's Guide, Version 5, Prentice Hall, 1997. ISBN #0-13-272550-9 (with Dr. Duane Hanselman)

Mastering MATLAB, A Comprehensive Tutorial and Reference, Prentice Hall, 1996. ISBN #0-13-191594-0 (with Dr. Duane Hanselman)

Student Edition of MATLAB User's Guide, Version 4, Prentice Hall, 1995. ISBN #0-13-184979-4 (with Dr. Duane Hanselman and The MathWorks, Inc.)

"Using Simulation with Hardware Verification for Teaching Computer Architecture", *Computer Applications in Engineering Education*, Vol 3 Number 3 pg 173, November 1995 (with Dr. Bruce Segee and Dr. John Field)

"Teaching Computer Architecture Through Simulation With Hardware Verification", *International Conference on Simulation in Engineering Education*, pp 13-18 Las Vegas, NV, January 1995 (with Dr. Bruce Segee and Dr. John Field)

The Design and Implementation of a Simulator for Four Microprogrammable State Machines, Thesis (M.S. Electrical Engineering), 1993

PROFESSIONAL SOCIETIES

USENIX - the Advanced Computing Systems Association

SAGE-the Systems Administrators Guild

University of Maine System Campus Liaison for USENIX and SAGE

LOPSA - League of Professional System Administrators

REFERENCES

Personal and professional references are available upon request.