

# Resume -- Richard Halstead-Nussloch, Ph.D., CPE

*Summary:* An experienced computing and ergonomics professional who is teaching computing in the university, consulting with industry, and researching issues in learning computing and using computers from the base of over twenty-five years of managing user-centered product design. Special expertise in research methodology and consulting on usability and ergonomics with Fortune 500 companies, being a versatile team player and leader, and managing cost reduction and productivity improvements.

## Professional Experience

**SOUTHERN POLYTECHNIC STATE UNIVERSITY, Marietta, GA 1995 - Present**

**Professor of Computing and Software Engineering / Manager - Georgia Digital Academy**

Teach graduate and undergraduate courses in computer science, information technology, and software engineering including the web, research methods, ergonomics and usability, computer graphics, visual programming in multiple languages, object-oriented technology, and ethics and professional practices in computing. Utilize innovative techniques and technology in teaching. Direct research and development projects of graduate students. Consult with management and users about computer hardware, software, set-up, the web, ISO 9000:2000 quality management systems (completed ISO auditor training in 2001), and ergonomics. Perform sponsored research. (Promoted to Professor in 2001.)

*Establishing the Georgia Digital Academy* through a project sponsored by the Georgia Technology Authority. The academy will facilitate communication and adoption of best practices by the information technology functions of state agencies to bring about more effective and information-based government.

*Established an Office of Research and Sponsored Programs* for the Southern Polytechnic campus. Initiated a campus-wide workshop to facilitate faculty, staff, and students to engage in sponsored research. Established policies and programs to support sponsored projects and a local program to support faculty professional development and scholarship. Participated in and led campus-wide proposal development. Increased the number of proposals submitted by five-fold and funding by at least three-fold.

*Taught and consulted at the Fachhochschule Anhalt, Bernburg and Koethen Germany* on a grant from the German State of Saxon-Anhalt June-July 2001, May-June 1999 and May-July 1998. Taught special seminars in the cognitive basis of knowledge and international business information technology. Consulted with local educational and industry leaders. Exchanged cultural ideas. Developed research proposals and plans.

*Established an Industry Advisory Board* for the Southern Polytechnic Computer Science Department. Collected and communicated requirements from industry to the department and university. Served as an employment conduit. Held symposia on computing topics of mutual interest between the university and industry. Developed new educational programs resulting in multiple grants of over \$250,000.

*Initiated a multiple-year research program into Intranets and instructional technology* under MCI sponsorship. Investigated the initial use of web technology for information dissemination and education in the firm under corporate sponsorship.

*Inaugurated distance learning and the use of the web* within the graduate and undergraduate curricula. Implemented the first computer science course taught via interactive distance learning. Put extensive course materials on the web. Selected for special Georgia University Board of Regents workshop on instructional technology.

*Developed a curriculum for teaching object-oriented programming and HCI.* Implemented the curriculum in courses in C++. Achieved a 90%+ satisfaction rating by students and customers.

## **INTERNATIONAL BUSINESS MACHINES CORPORATION, Atlanta, GA 1981 - 1995**

### **Senior Human Factors Engineer/Scientist**

Develop, research, and test human factors aspects of IBM software and hardware products, and documentation. Find and implement cost reductions, productivity improvements, and quality enhancements. Consult with division and corporate executives on user-centered design and hardware and software ergonomics. Provide consulting services to customer executives.

*Established a usability function* within Atlanta IBM. Implemented the design team approach. Achieved a 95% satisfaction rating by customers. Received an Achievement Award.

*Simplified documentation for computer hardware configuration and operation*, saving customers significant staff time, while saving IBM over \$1,000,000 in yearly production costs for the 3090 product line alone. Received Division President's Award.

*Led the design of the first GUI applications for IBM*. Design standards brought nine user interface designs into a single, consistent look-and-feel for IBM applications. Promoted to Senior Engineer.

Led an IBM team on an *urgent, short-duration project* covering large-processor hardware installation. Product was immediately implemented by hundreds of IBM service personnel. Quality ratings increased and errors and cycle-time were reduced by an estimated 75%.

Designed, developed, and tested a *new kind of hardware installation manual* for large processors. Size and volume of the manual reduced by 70% resulting in a 30% reduction in installation expense.

*Invented a thumb cursor control* for notebook computers of the early 1990's.

*Assessed the performance and usability of customer service* in the transportation and insurance industries. Recommendations for hardware, software, and process improvements adopted by customer executives to increase employee productivity and customer satisfaction.

*Co-chaired the HFES meeting in Atlanta and served as Industry Liaison* for the ACM CHI Conference. Meetings had record-breaking attendance from around the world and won high satisfaction ratings while also exceeding all revenue and expense requirements.

*Demonstrated the necessity for re-engineering the computer operator's job and workspace* in the large, complex systems environment. This initiated a new and very profitable line of graphic system control and management products for IBM. Earned Product Manager's Award.

*Established ergonomic guidelines for using the half-billion tone phones* as worldwide, convenient access to information services. Received IBM Corporate Award for a patent issued in the use of phones to access information. Guidelines used by ANSI and ISO standards bodies.

*Chaired the IBM Internal Symposium for Usability and Ergonomics*. Expanded scope while holding symposium meetings on the IBM television network, saving about \$400,000 in meeting costs.

*Managed the design, development, construction, and hardware installation of a centralized learning center*, resulting in \$225,000 annually in cost savings. Presented with a Director's Award.

## **Previous Employment**

*Managed multiple government (e.g., NHTSA) and commercially sponsored research and development projects*. Managed personnel and resources, and had financial responsibility for hardware, software, and policy program development projects and large courses at the University of Michigan, Stevens Tech, Inter-Study, and North Star Research, and as an independent consultant. In the sum, managed projects worth over \$1,000,000.

## Education

- Ph.D., Cognitive Science (Experimental Cognitive Psychology), 1978  
University of Michigan, *Ann Arbor, Michigan*
- B.A., Psychology, 1971  
Macalester College, *St. Paul, Minnesota*  
*Summa cum laude* with departmental honors in psychology  
Phi Beta Kappa in 1970  
National Presbyterian Scholar

## Professional Organizations

- American Association for Artificial Intelligence
- Association for Computing Machinery (ACM) and SIGCHI
- Human Factors and Ergonomics Society
- Board Certified Professional Ergonomist--CPE, Certificate Number 496

## Publications and Presentations/References

Over 100 publications, presentations, and reports. A complete listing is available upon request.  
A list of references is available upon request.

<http://tapestry.spsu.edu/drrich>  
<http://www.mindspring.com/~ergo-gem>  
<http://www.GlobalErgo.com>

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