

Frederic B. “Rick” Walsh

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Degreed **Computer Scientist** with over 40 years of experience in a wide range of disciplines, including numerous consulting, design, teaching, and project leadership assignments. Application of computers and instrumentation in the following areas; Biomedical, Automotive, Pharmaceutical, Electronics, Chemical, Aerospace, Telecommunications, Financial and Business Systems, Manufacturing, Mining and Metallurgical Processing, Secondary and Post-secondary Education, Publishing, and Military Applications.

TECHNICAL EXPERTISE

Mainframes, Minicomputers and Microprocessors. Hardware Architectures, Interfacing of Peripherals and Instrumentation, Real-time Process Control, Operating Systems including Real-time and Parallel Processor systems, Programming Languages, Database and Network Organization and Optimization, and Human Engineering of User Interfaces.

PROFESSIONAL EXPERIENCE

Hewlett Packard, Skokie IL, Southfield & Farmington Hills MI **1970 - 1982**
Systems Engineer and Training Center Manager

- Established two training centers and taught a variety of classroom courses
- Developed and taught numerous customized on-site customer classes
- Provided both pre-sales consulting and post-sales customer training and support
- Developed a computerized engine dynamometer simulator system with unique “run-by-wire” real-time controls for demonstration and training purposes
- Designed “micro-programmed” real-time data acquisition and analysis micro-instructions for Ford Motor Company Research Laboratories. These routines replaced customized hardware, provided a performance improvement of over 300 %, and remained at the core of “state of the art” shock and vibration testing for 15 years
- Designed a dual-redundant real-time process monitoring system, including sensors, data capture and analysis, “watchdog” timers and alarms, and “fail over” operation utilizing automatic failure detection and recovery
- Consulted and developed numerous computerized data collection systems for “factory floor” manufacturing environments

U.S. Government Review Consultant **1980**

Jointly appointed along with **Dr. Raymond Neff** of **Harvard University** and **Dr. Frank Starmer** of **Duke University** to investigate and report on the deficiencies within the **National Bioassay Project**, and to ensure compliance with U.S. Food and Drug Administration (FDA) Good Laboratory Practice (GLP) regulations. The National Bioassay was a multi-year surveillance program identifying environmental carcinogens and conducted by 25 laboratories nationwide under contract to the National Cancer Institute (NCI) division of the National Institute of Health (NIH) and the National Institute of Environmental Health Sciences (NIEHS). Areas of primary responsibility included focusing on laboratory-installed instrumentation and sensor interfacing, network communications, human computer interfaces, data integrity, and operational procedures.

Herstal Automation Ltd., Berkley MI and Sarasota FL

1980 - 1999

Founder and Managing Director

- Managed hardware & software R & D engineers, sales, support, and manufacturing personnel at offices in Michigan and Florida
- Identified deficiencies in existing memory systems for the Hewlett Packard HP 1000 minicomputer. Led team of engineers in developing and manufacturing improved expansion memories for use with HP 1000 computers
- Led successful sales and marketing programs to supply Hewlett Packard with Herstal memory systems for resale to HP customers. Directly marketed Herstal memories to numerous users of HP 1000 computer systems worldwide
- Led teams of engineers in the development of additional hardware and software products and drivers which allowed various peripheral devices to be attached to minicomputers, UNIX systems, microprocessors, and PC systems
- Traveled extensively in the United States, Canada, Europe, and Australia to present training courses and sales seminars at customers' sites, conferences and exhibitions
- Marketed automated library systems for unattended data backup to customers worldwide

Wayne State University, Detroit MI

1980 - 1985

Departments of Computer Science and Electrical and Computer Engineering

Adjunct Instructor 1980 to 1983

Graduate Assistant II 1984 to 1985

- Taught a variety of Computer Science and Computer Engineering courses to undergraduate and graduate students
- Received "excellent" ratings on student evaluations of instructors

Manatee Community College, Bradenton FL

1999 – 2001

Department of Computing and Engineering Technology

Lecturer - Full time faculty appointment

Pioneered the use of Web-based Distance Learning systems at MCC.

Developed an Internet based programming course, which accommodated distance learners, as well as traditional classroom students.

Participated in numerous seminars and conferences on distance learning effectiveness and instructional technology tools and systems

Middle School Educator

2003 – 2006

Science, Computer Technology, and Robotics Instructor

Hillsborough County Florida, July 2003 to August 2006

Manatee County Florida, August 2006 to December 2006

University of South Florida, Sarasota FL

2005 -- present

Department of Information Technology

Adjunct Instructor May 2005 to Dec 2006

Visiting Instructor Dec 2006 to Present

Teaching Assignments:

Computer Organization

Human Computer Interfaces

Information Technology Concepts

Operating Systems Security

Information Technology Ethics

Security Management

Data Base Security and Audits

Information Technology Senior Project

Network Security and Firewalls

Operating Systems

Information Technology Seminar

Web Security

CERTIFICATIONS and TEACHING QUALIFICATIONS

Certified Information Systems Security Professional, (CISSP) Certificate # 105617

Florida Professional Educator's Certificate # 916474

Qualified Subjects include; Biology 6 –12, Chemistry 6 –12, Physics 6 – 12, Computer Science, Earth / Space Science 6 – 12, Industrial Arts & Technology Education 6 – 12, Middle School General Science 5 – 9, and Middle Grades Integrated Curriculum 5 – 9.

EDUCATION

University of Illinois, Urbana IL and Chicago IL **1964 - 1970**
BS, Chemical Engineering, 1970

Wayne State University, Detroit MI **1974 - 1984**
MA Computer Science, 1980
Computer Engineering, Ph.D.-Candidacy (ABD), 1984

University of South Florida, Tampa FL **2001-2001**
Graduate courses in Web Development & Programming

Manatee Community College, Bradenton FL **2001- 2002**
Certification Courses for MCSE, MCDBA, and MCT including courses for Servers, Cisco Routers, SQL Databases, Network Architecture and Network Security

Nova Southeastern University, Davie FL **2007**
Doctoral Courses in Information Privacy and Human Computer Interface

PUBLICATIONS

Co-authored with Professors Neff and Starmer, **“Report to the NIEHS on the State of the National Bioassay Program”, 1980**

Authored articles in the first three issues of **Unicenter Advisor** Magazine, 1996 & 1997, on computer systems management, including; Data Security, Automated Data Archiving, Data Backup Strategies, Automated Disc and Tape Library Autochangers, and Comparisons of current capabilities and evolutionary trends in Optical Disc and high capacity Magnetic Tape technologies.

MEMBERSHIPS

IEEE
ACM