

## Vita: Robert A. Willis Jr.

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Former Chair of Computer Science. Lecturer experienced in teaching a wide variety of computer subjects. Responsible manager skilled in the supervision of technical personnel. Capable of utilizing software engineering, management, computer programming skills in producing programs for applications in technical fields including electronic and avionics systems, or in business and administrative areas.

## Experience

**1999 – 2006**                      **Chair Department of Computer Science**

**1986 –Present**                      **Assistant Professor/Lecturer**

- Programming Languages, Software Engineering, Operating Systems, Microprocessors, Computer Theory, Data Communications, Ada, LISP, Data Base Management, Computer Science I/II, File Processing, Object Oriented Programming, Concurrency.
- Director of the Office of Naval Research (ONR) HBCU Graduate Fellowship and the U. S. Navy Summer Faculty Fellowship programs. 1/1995 – 8/2002.
- Past Director of the ONR Student Enhancement in Mathematics (SEMS) program.
- Responsible for department receiving and maintaining Computer Science Accreditation and several curricula advances.

**2001 – Present**                      **Idaho State University: Affiliate Assistant Professor of Information Assurance and Informatics**

## Education

**1983–1992**                      **William and Mary**                      **Williamsburg, VA**

- 12 Semester hours Ph.D. Computer Science.
- M. S. Computer Science The College of William and Mary, Williamsburg, Virginia. 1985.

**1976–1978**                      **Chapman College**                      **Orange CA,**

- B. S. Electronics Technology

**1975–1977**                      **Community College of the Air Force**

- A.A.S. Radar Technology

## Research Activities

- Principal investigator for ONR (Office of Naval Research) Special Programs. 6/96 – 8/2003.
  - U. S. HBCU/MI Navy Summer Faculty Program (Grant expired 8/2002)
  - HBCU Graduate Fellowship Program
- Principal investigator for NASA - Johnson Space Center software development grant. 1/2000 – 8/2002.
- Principal Computer Science investigator and/or research mentor for ONR (Office of Naval Research) grant 5-24688, Student Enhancement in Mathematics and Science, 6/90 – 6/96.

- Principal investigator for Navy contract N60921-89-C-A149, For the Establishment of A Prototype Environment for the NeXT Graphics Workstation, 6/89 - 9/90.
- Principal consultant for NASA Grant 1-789, Graphics Application Utilizing Parallel Processing, 9/87 - 8/94.
- Principal Ada researcher for DOD grant DAAAL03-87-6-0125, The Promotion of Research and Development, 1/88-9/88
- NASA American Society of Engineering Education Summer Fellowship program, Summer 1987. Research methods to verify/validate Knowledge Based Systems.

## Research Interests

- Information Assurance issues in Software Design and Development.
- Concurrency/ Real-Time issues utilizing the Java and C# programming languages and their constructs. Problems involved with distributed systems.
- Issues involving translation of prototypes into high level languages.
- Using animation for computer science education.

## Publications/Presentations

- Verification and Validation of Artificial Intelligence Systems. NASA Contractor Report 178368. (1987, abstract)
- Program Development and Ada: A Paradigm for Teaching Programming to Lower Level Computer Science Majors. Proceedings of the Fifth Annual Ada Software Engineering Education and Training Symposium. (1990, referred)
- Ada and Concurrency in the Classroom: Using Ada to Teach Concurrency. Proceedings of the Sixth Annual Ada Software Engineering Education and Training Symposium. (1991, referred)
- Intelligent Abstract Data Types. (With Dr. Larry Morell) Proceedings of the 10th Annual National Conference on Ada Technology. (1991, referred)
- Using Pseudo Classifiers To Reduce Searches. Virginia Academy of Science 70th Annual Meeting. (1992)
- Computer Science II at Hampton University. ADMI Regional Workshop. (1998)
  - A Top-down Approach to Coordinating the Undergraduate Computer Science Core. (With Dr. Larry Morell) ADMI '98

## Student Mentoring

- Upgrading A LISP Prototype To A System In Ada. M. Johnson, K. Robinson, and R. Washington. Seventh Annual Conference on Ada Technology. (1989)
- Designing An Ada Tutorial Using Object Oriented Design. C. D. Marable, Jr. and C. C. Belgrave. Eighth Annual National Conference On Ada Technology. (1990)
- Cigarette Smoker: An Exercise in Concurrent Programming. T. Newsome. Ninth Annual National Conference On Ada Technology. (1991)
- A Taxi Service-An Exercise in Simulation With Ada. Torrin Sanders and James Irvin. Virginia Academy of Science 70th Annual Meeting. (1992)
- Intelligent Abstract Data Types. Karen Spells. Eleventh Annual National Conference On Ada Technology. (1993)
- Using Pseudo Classifiers To Reduce Searches. Rodney Robinson. World Congress on Expert System (Lisbon, Portugal 1/94)
- Making An Intelligent Abstract Data Type Intelligent. Tara Butler. Virginia Academy of Science 73rd Annual Meeting. (1995)
- Challenges Of Implementing A Concurrent Program On A Distributed System. Sujuan Upshaw. Virginia Academy of Science 73rd Annual Meeting. (1995)

- The Semantics of Programming Languages. Sujuan Upshaw. ADMI '96 (Mayaguez, P. R., 1996)
- Implementing Data Structure Switching Dynamically. Ivy Carter. Virginia Academy of Science 75th annual meeting. (1997)
- Improving Traditional Searching Techniques. Alec White. Virginia Academy of Science 75th annual meeting. (1997)
- Dynamic Data Structure Switching. Ivy Carter. Proceedings ACM Annual Meeting. (1998)
- Disjoint Set Abstract Data Type. Lorra L. Pollard, ADMI '99 (Duluth, MN)
- Amortized Analysis. Christopher Sutton, ADMI '99 (Duluth, MN)
- A Study of Rings, Maps, & Bags Advanced ADT's. Cathy Reynoso and Kesha Lacks, ADMI '99 (Duluth, MN)
- Intelligent Abstract Data Types. Tariq Wilson, NAFEO 2000
- Speech and Language Recognition. Brooke Davis, Alliance for Minority Participation 2001 (Tuskegee, AL)
- What is Ubiquitous Computing? Sharita Sumner, ADMI 2003 (Washington, D.C.)
- Data Mining and Knowledge Discovery, ADMI 2003 (Washington, D.C.)

#### Professional Affiliations

- Association of Computing Machinery
- Institute of Electrical and Electronic Engineers, Computer Society
- Association for Engineering Education
- Virginia Academy of Sciences

#### Professional Achievements

- Senior Team Member, "Project BRACE: Bridging Research and Curriculum Experiences", NSF Award # CNS-0420473, 08/2004 – 12/2004
- Technical Committee Member, IEEE 1<sup>st</sup> International Conference on Multimedia Services Access Networks. 11/2004-11/2005
- Senior Personnel NSF grant, Designing Software for a Virtual Educational Community in Science and Mathematics Using the Infrastructure of a Mobile Learning Environment, NSF, Lead institution UNC – Wilmington (8/2004-present)
- President (Virginia Academy of the Sciences) 2001
- Vice-President of Programs. Association of Departments of Computer, Information Science/Engineering at Minority Institutions (ADMI) 7/00 - Present
- Board Member At Large. Association of Departments of Computer, Information Science/Engineering at Minority Institutions (ADMI) 6/97 – 7/00.
- Treasurer (Virginia Academy of the Sciences) 6/97 - 6/98
- Editor and Council of the Computer Science Section (VAS) 6/93 – Present
- Chairperson of the Computer Science Section (Virginia Academy of the Sciences) 6/91 - 6/93

#### Honor Societies

- Upsilon Pi Epsilon

#### Awards

- Recipient of Hampton University's Lindback Distinguish Teacher's Award (1990)
- Who's Who Among America's Teachers (1996, 1998, 2000, 2002, 2004)
- Elected Fellow of the Virginia Academy of Science (2006)