CURRICULUM VITA

Thorna O. Humphries

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Associate Professor

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Education

- Ph.D. (Computer Science) August 2000, University of Colorado, Boulder, Colorado. Thesis: *An Infrastructure to Generate Experimental Workloads for Persistent Object System Performance Evaluation.* Advisors: Alexander L. Wolf and Benjamin G. Zorn.

- M.S. (Computer Science) June 1981, Massachusetts Institute of Technology, Cambridge, Massachusetts. Thesis: *Overloading in Programming Languages with Data Abstractions.* Advisor: Barbara Liskov.

- B.S. (Mathematics) May 1977, Bennett College, Greensboro, North Carolina.

Research Activities and Professional Experience

08/2005-Present	Associate Professor, Department of Computer Science, Norfolk State University, Norfolk, Virginia. Since January 2014, serving as the Graduate Program Director for the Computer Science Master's Program.
08/2000-05/2005	Assistant Professor, Department of Computer and Information Sciences, Florida Agricultural and Mechanical University, Tallahassee, Florida.
06/1996-06/2000	Research Assistant, POSSE Group, University of Colorado, Boulder, Colorado. PhD thesis research associated with the POSSE (Persistent Object SyStems Evaluation) project, a project that investigated the use of

trace-driven simulation to evaluate the performance of a persistent object system (i.e., focusing on methods to improve automatic storage reclamation of persistent object systems). Developed a portable trace format PTF (POSSE Trace Format) to capture the semantics of a higher-level application and an application modeling toolkit AMPS (Application Modeling for Persistent Systems) to ease the creation of self-tracing applications. PhD thesis describes the use of a trace-driven simulation approach to develop a novel technique for generating multi-user workloads for performance evaluation of persistent object systems.

06/1991-08/1991 Faculty Intern, IBM, Boca Raton Florida.
Developed a prototype of an installation tool to determine the feasibility of packaging EDLAN product line with Novell's Netware 386 in an effort to use the IBM PC as a network server in dedicated mode.

08/1990-08/1995 Assistant Professor, Department of Computer and Information Sciences, Florida Agricultural and Mechanical University, Tallahassee, Florida.

10/1987-08/1990 Senior Software Engineer, Wang Laboratories, Inc., Lowell, Massachusetts.

Designed and implemented resource sharing on entry ordered datasets in the Extended Database Management System (XDMS). Designed and implemented enhancements to the supervisor code of the Wang proprietary operating system. Ongoing responsibilities included analyzing, designing, and implementing solutions to problems reported against the XDMS/DMS subsystems of the operating system as well as enhancements. Provided technical information and assistance to internal users of the VS product line, customer support personnel and pre-sales technical support personnel on the VSOS access methods subsystems. Served as project leader.

11/1983-10/1987 Software Engineer II, Wang Laboratories, Inc., Lowell, Massachusetts.

Maintained pre-released VSOS software. Designed and implemented software that enabled VS mainframes to be loosely coupled together using global identifiers to identify mailboxes and volumes. Specifically, designed and implemented the operating system support for the formation and handling of the outbound message by the IO system and the OS resource manager that interfaced with the communication subsystem. Received a joint patent for this work.

04/1982-11/1983 System Analyst II, Xerox Corporation, Webster, New York.

One of the designers and implementers of a database management system that interfaced with point of sales terminals for the internal office equipment store. Evaluated several database management systems for use in the Rochester Technical Computer Center (RTCC). Aided users of RTCC with programming problems. Developed and taught a Pascal programming course for RBG Technical Education Center.

06/1981-04/1982 System Analyst, Xerox Corporation, Webster, New York.

Implemented a part of the accounting system used by Rochester Technical Computer Center (RTCC) for chargeback. Performed integration testing on the complete accounting system and identified and fixed several errors.

Journal Publications

1. M.E. Rizvi, T. Humphries, D. Major, M. Jones, and H. Lauzun, "A CS0 Course Using Scratch", *The Journal of Computing Sciences in Colleges*, Volume 26, Number 3, pages 19-27, January 2011.

2. Thorna O. Humphries, Artur W. Klauser, Alexander L. Wolf, and Benjamin G. Zorn, "An Infrastructure for Generating and Sharing Experimental Workloads for Persistent Object Systems", *Software: Practice and Experience*, 30(4):387-417, 2000.

Referred Conference and Workshop Publications

3. M.E. Rizvi and T. Humphries, "A Scratch-based CS0 Course for At-Risk Computer Science Majors", The Proceedings of Frontiers in Education (FIE) 2012, Seattle, WA, October 2012.

4. M.E. Rizvi, T. Humphries, D. Major, M. Jones, and H. Lauzun, "A New CS0 Course for At-Risk Majors", The Proceedings of the 24th IEEE-CS Conference on Software Engineering Education and Training, Honolulu, Hawaii, May 2011.

5. C. Boothum, D. Touretzky, E. Jones, T. Humphries, and R. Caldwell, "The ARTSI Alliance: Using Robotics and AI to Recruit African-Americans to Computer Science Research", Proceedings of the 24th International Florida Artificial Intelligence Research Society Conference (FLAIRS-11), Palm Beach, FL, May 2011.

6. M.E. Rizvi and T. Humphries, "A Study of a CS0 Course to Increase Retention in CS", The Symposium on Computing at Minority Institutions (ADM 2011), Greenville, SC, April 2011.

7. David S. Touretzky, Glenn V. Nickens, Ethan J. Tira-Thompson, and Thorna O. Humphries, "An Inexpensive Hand-Eye System for Undergraduate Robotics Instruction", *SIGCSE '09*, Chattanooga, TN, March, 2009.

8. Janine Hernandez, Thorna Humphries, and Felicia Doswell, "Talking Back to VBgov.com", *ACMSE 09*, Clemson, SC, March, 2009.

9. Thorna Humphries and Andre van der Hoek, "An Approach to Recruitment for Computer Science Doctoral Programs", Poster Session, *SIGCSE 2008*, Portland, OR, March 2008.

10. Thorna O. Humphries, Alexander L. Wolf, and Benjamin G. Zorn, "A Framework for Storage Management in Persistent Object Systems", *OOPSLA'97 Workshop on Memory Management and Garbage Collection*, Atlanta, Georgia, October, 1997.

Technical Reports and Unrefereed Publications

11. Thorna Humphries and Mona Rizvi, "A Study in the Use of Scratch in CS0 Courses*"*, accepted for publication in *NSU Research Magazine*, Spring 2010 issue.

12. D.Andrew-Graham, L. Harrison, T. Humphries, and P. Lonergan, "Information Literacy*"*, *REASON Newsletter*, 1(1), Norfolk State University Undergraduate Studies, 2009.

13. Thorna O. Humphries and Michael Jones, "A User Friendly Interface for Smart Pervasive Environments", *NSU Research Magazine*, Vol. 2(1), Spring 2009.

14. Thorna O. Humphries, Artur W. Klauser, Alexander L. Wolf, and Benjamin G. Zorn, *POSSE Trace Format, Version 1.0*, University of Colorado at Boulder, Technical Report CU-CS-897-00, January, 2000.

15. Thorna O. Humphries, *An Infrastructure to Generate Experimental Workloads for Persistent Object System Performance Evaluation*, University of Colorado at Boulder, Technical Report CU-CS-906-00, August, 2000.

Funded Grants

- Thorna Humphries and Mona Rizvi, principal investigators. NSF Award number CNS-1042306, "BPC-AE: Collaborative Research: The ARTSI Alliance: Advancing Robotics Technology for Societal Impact", 12/08/2010-12/31/2012, $50,319.

- Thorna Humphries and Laura Dillon, principal investigators. NSF Award number CCF-1041490, "Group Travel Grant for Faculty at Minority Institutions", 09/01/2010-08/31/2011, $25,000

- Thorna Humphries, STARS Faculty Summer Research Grant, "Security and Forensics in Cloud Computing", 05/16/10-07/21/10, $9000.

- Thorna Humphries, STARS Faculty Summer Research Grant, "An Investigation into the Development of Secure Software Healthcare Systems for Public Clinics and Small Medical Practices", 05/16/09-07/21/09, $8000.

- Mona Rizvi and Thorna Humphries, principal investigators. NSF Award number, DUE-0837695, "A Scratch-based CS0 Course for At-Risk Students", 3/01/09- 2/28/11, $143,425.

- Thorna Humphries, STARS Faculty Summer Research Grant, "Location-Based Systems for U.S. Navy Planned Maintenance and Training and Assessment Programs", 05/16/08-07/21/08, $8000.

- Thorna Humphries, principal investigator. Subaward number, 2008-1963, NSF Award number, DUE-0618869, "SimSE: Expanding a Proof-of-Concept Software Engineering Simulation Environment into a Comprehensive Classroom Approach for Educating Students in the Software Development Process", 1/02/08-10/31/08, $6,680.

- Thorna Humphries and Mona Rizvi, principal investigators. NSF Award number, CNS-0742198, "Collaborative Research: BPC-A: ARTSI: Advancing Robotics Technology for Societal Impact", 9/20/07-9/31/10, $142,390.

- Thorna Humphries, STARS Faculty Summer Research Grant, "User Interface Analysis and Design for Lighthouse, A New Approach to Software Development", 05/16/07-07/21/07, $8000.

- Andre van der Hoek and Thorna Humphries, principal investigators. NSF Award number CCF-0630455, "Student Travel Support for ACM SIGSOFT 2006/FSE14 INSPIRATIONS: A Ph.D. Orientation for Undergraduate and M.S. Students", 07/01/06-07/01/07, $10,000.

- Thorna Humphries and Andre van der Hoek, principal investigators. Microsoft Funding, "Student Travel Support for ACM SIGSOFT 2006/FSE14 INSPIRATIONS: A Ph.D. Orientation for Undergraduate and M.S. Students", 02/06, $10,000.

- Thorna Humphries, STARS Faculty Summer Research Grant, "Security and Survivability Issues in Wireless Sensor Networks, 05/16/06-07/21/06, $7500.

- Deidre Evans, Edward Jones, and Usha Chandra, principal investigators; Clement Allen, Christy Chatmon, Thorna Humphries, Prasad Bhanu, senior personnel. NSF Award number CNS-0424556, "MII: Holistic Model for Minority Education and Research", 10/01/04- 09/30/06, $409,368.

Patents

1989 Loosely-Coupled Computer System using Global Identifiers to Identify Mailboxes and Volumes (listed under Parker et al., patent number 4,851,988)

Presentations

- "Overview: A Scratch-based CS0 Course and its Associated NSF TUES Type 1 Study", MSR Talk Series, Microsoft Research, Redmond, WA, October 2012

- Workshop: "Scratch Programming for Undergraduates", *Consortium for Computing Sciences in Colleges - Eastern Region (CCSCE) 2011*, Arlington, VA, October 2011

- "A New CS0 Course for At-Risk Majors" *24th IEE-CS Conference on Software Engineering Education and Training (CSEE&T),* Honolulu, HI, May 2011

- "CS0 Programming Course using Scratch", *Software Engineering Educators Symposium(SEES)*, Santa Fe, New Mexico, November 2010.

- "Enrichment of the IA Concentration in the CS Masters Program", Information Assurance Capacity Building Program, INI, Carnegie Mellon University, Pittsburgh, PA, July 2009

- "Pros and Cons of an Ethical Hacking Course", *4th Annual Information Assurance Symposium*, Hampton University, Hampton, VA, January 2009

- "User Interface Analysis and Design for Lighthouse", *STARS Summer Faculty Symposium*, Norfolk State University, Norfolk, VA, July 2007

- "Preparing for and Selecting a Doctoral Program", *FSE14 Inspirations Workshop*, Portland OR, November 2006

- "Tips for Success in Graduate School", Computer Science Graduate Forum, Norfolk State University, November 2006

- "Tips for Success", Computer Science ACM Women's Organization, Norfolk State University, Norfolk, November 2006

- "Security and Survivability Issues in Wireless Sensor Networks", *STARS Summer Faculty Symposium*, Norfolk State University, Norfolk, VA July 2006

Academic Honors, Awards, and Major Service

- Chair of Faculty Teaching Award Committee, Norfolk State University, 2014.

- Best Faculty Paper Award, Consortium for Computing Sciences in Colleges Eastern Conference 2010 (CCSCE 2010), Huntingdon, PA, October 2010
- President of Board, ADMI, 2010-2012
- Secretary of Board, ADMI, 2012-present
- Board Member, ADMI, 2007- 2010
- Faculty Senate Vice-President, Norfolk State University, 2010.
- Faculty Senator, Norfolk State University, October 2008- 2010.
- University of Colorado Fellowship, 1996-2000.
- Recipient of the FAMU Faculty Development Grant, 1995 -1996.
- Wang Laboratories Research and Development Division Award, 1988.
- Designed and managed the implementation of a Minority Summer Internship Program for the Host Systems Development Organization of Wang Laboratories, 1988.
- Wang Laboratories Research and Development Team Award, 1986.
- Xerox Corporation Fellowship, 1977-1980.
- Bennett College Academic Scholarship, 1973-1977.

Research Interest

Computer science education, data management (persistent object systems), software engineering, pervasive systems and security/information assurance.

Professional Activities

- Reviewer for FIE 2013, FIE 2014.
- Program Committee Chair, ADMI 2009-2010, 2014.

- Reviewer for FLAIRS 2013 Robotics Workshop

- Member of the University Review Committee, Norfolk State University, 2013.

- Co-chair, Software Engineering Educators Symposium (SEES), 16th, 18th and 20th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE16, FSE 18 and FSE 20), November 2008, November 2010, November 2012

- Program Committee Member, ADMI 2008

- Member, QEP Community of Inquiry (Literacy) Committee, 2009.

- Member, Computing Innovation (CI) Fellows Project Selection Committee, 2009.

- Panel Reviewer for National Science Foundation.

- Member, Computer Science Peer-Review Committee, Norfolk State University, 2007-2008, 2014-2015.

- Chair, Computer Science Peer-Review Committee, Norfolk State University, 2006-2007, 2013-2014.

- Co-chair, Inspirations Program, 14th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE14), November, 2006.

- Chair, Regional Spelman College Computer Science Olympiad, Norfolk State University, 2007.

- Member, School of Science & Technology Compliance Committee, Norfolk State University, 2005-2006.

- Member, ETS Computer Science Graduate Examination Advisory Board, 2002-2004.

- Chair, Technology Committee (Ad-hoc Faculty Senate Committee), Florida A & M University, 2003-2004.

- Member, Florida A&M University Board of Trustees Presidential Search Advisory Committee, 2001-2002.

- Chair, Equity Committee (Ad-hoc Faculty Senate Committee), Florida A & M University, 2001-2002.

- Chair, CAC Accreditation Committee for the Department of Computer Information Science, Florida A & M University, 2000-2001.

- Graduate Student Representative, Department of Computer Science Executive Committee at University of Colorado, 1998-1999.

- Graduate Student Representative, Diversity Committee of the College of Engineering at the University of Colorado, 1998-1999.

- Participant, Women in Engineering Round Table, University of Colorado, October, 1999.

Students Supervised

- Troi Williams, "Programming Idealized Robots in the Harsh Real World", M.S. Thesis, Norfolk State University, July 2014. (co-directed)

- Jasmine Blunt, "PatientConnect: A Doctor to Patient Communication Application", Master's Project, Norfolk State University, July 2014.

- Terrence Doggett, "Introducing Location Based Services using RFID Technology to the U.S. Navy's Preventive Maintenance System", M.S. Thesis, Norfolk State University, June 2013.

- Christopher Lanclos, "Dynamic Auctioning Algorithm Program (DAAP)", M.S. Thesis, Norfolk State University, June 2012.

- Gerine Staten, "Computer Science Survey Database: The Role of Database Management and Analyzing the Response of Students in Programming Courses", Master's Project, Norfolk State University, May 2012.

- Glenn Nickens, "Playing Tic-Tac-Toe in Tekkotsu: The Development of the Grasper", M.S. Thesis, Norfolk State University, September 2011. (co-directed)

- Brendina Rodgers and Lakeishawn Hunter, "Designing and Electronic Medical Record System using Cloud Computing for a Community Health Center Environment", Master's Project, Norfolk State University, May 2011.

- Dion John, "A Graphical Representation of an Emerging Design Using UML Collaboration Diagrams", M.S. Thesis, Norfolk State University, March 2011.

- Michael Jones, "Storyboarding to Specify Ambient Intelligent Environments", M.S. Thesis, Norfolk State University, October 2007.

- Eric Palmer, “Reverse Engineering to Identify Metadata and Design Patterns Applicable to Class and Collaboration Diagrams”, M.S. Thesis, Florida A&M University, April 2002.

Served as a Committee Member

1. Krystal Belfield, M.S. Thesis at Norfolk State University
2. Jonathan Harris, M.S. Thesis at Norfolk State University
3. Tamara Ortiz, M.S. Thesis at Norfolk State University
4. Janine Hernandez, M.S. Thesis at Norfolk State University
5. Kenneth Corns, M.S. Thesis at Norfolk State University
6. Latrice Toliver, M.S. Thesis at Norfolk State University
7. Aubrey Rembert, M.S. Thesis at Florida A & M University (co-directed)

Courses Taught

1. CSC260 Computer Programming II
2. CSC464 Operating Systems
3. CSC380 Software Engineering
4. CSC467 Advance Topics (Robotics)
5. CSC498/CSC499 Senior Seminar I and II
6. CSC526 Structured Programming
7. CSC564 Operating Systems
8. CSC760 Secure Software Development