

Curriculum Vitae

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

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| 08/2005-Present | Associate Professor, Department of Computer Science, Norfolk State University, Norfolk, Virginia. |
| 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.
- 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. 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 Publications

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

Workshop Publications

3. 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

4. Thorna O. Humphries and Michael Jones, *A User Friendly Interface for Smart Pervasive Environments*, to appear in NSU Research Magazine.
5. 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.
6. 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.

Research Grants

- 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”, Amendment Number 001, 9/15/07 – 8/31/09, \$20,954.
- Thorna Humphries and Mona Rizvi, principal investigators. NSF Award number, CNS-0742198, “Collaborative Research: BPC-A: ARTSI: Advancing Robotics Technology for Societal Impact”, 9/20/07-9/20/09, \$70,000.
- 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.

- Thorna Humphries, principal investigator. “Collaborative Proposal: Improving Undergraduate CS Education by Providing Cybersecurity Support to Community Service Organizations”, DUE-0231201, \$117,505 (06/06/02 - rejected).
- Thorna Humphries, Mona Rizvi, and Aurelia Williams, principal investigators. “BPC-A-Collaborative Research: TRACS-A Regional Collaboration for Advancing Minority Participation in Computing”, CNS-0634408, NSF, \$563,545.00, (05/17/2006 – rejected).

Academic Honors, Awards, and Major Service

- Co-chair, Software Engineering Educators Symposium (SEES), 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE16), November, 2008.
- Program Committee Member, ADMI 2008, April 2008.
- Board Member, ADMI, 2007- present.
- Co-chair, Inspirations Program, 14th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE14), November, 2006.
- 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

Persistent object systems, performance evaluation, simulation, software engineering, data management, and applied use of sensor networking.

Professional Activities

- Faculty Senator, Norfolk State University, October 2008- present.
- Member, Computer Science Peer-Review Committee, Norfolk State University, 2007-2008.
- Chair, Computer Science Peer-Review Committee, Norfolk State University, 2006-2007.
- 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.

Patents

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

Students Supervised

- 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. (Co-directed)

Served as a Committee Member

- Aubrey Rembert, M.S. Thesis
- Latrice Toliver, M.S. Thesis at Norfolk State University