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Education:

Doctor of Philosophy in Computer Science	North Carolina Agricultural and Technical State University	2016
Master of Science in Computer Science	North Carolina Agricultural and Technical State University	1996
Master of Science in Applied Mathematics	Western Carolina University	1989
Bachelor of Science in Mathematics	Wingate University	1987

Professional Experience:

Assistant Professor	North Carolina Agricultural and Technical State University	2001-Present
<ul style="list-style-type: none">In my position, I teach a wide variety of undergraduate computer science courses: Algorithms, Programming I & II, Operating Systems, Senior Project advisor, and Programming Languages.		
Computer Science/Mathematics Instructor	Davidson County Community College	1999-2001
<ul style="list-style-type: none">Taught a wide variety of undergraduate mathematics courses as well as Introduction to C++ and advanced C++ with emphasis on data structures.		
Information Systems Instructor	Davidson County Community College	1997-1999
<ul style="list-style-type: none">In this position, my duties included teaching: networking, operating systems and programming courses; advising the college on both software and hardware decisions; organizing the deployment of computers on campus; development of networking curriculum and student email creator and administrator.		
Network Instructor	Edgecombe Community College	1996-1997

Member of Ph.D. Development Committee
Member of Computer Science Assessment Committee
Co-Chair, Web Engineering Program Development Committee
Industrial Liaison for Intuit, Intel, and Cargill
Member of High Performance Computation Group
Coach for ACM Programming Contest
Faculty Advisor and Organizer: Local NC A&T ACM Chapter
Faculty Advisor and Organizer: A&T Linux User Group
E.T.S. A.P. Reader for Computer Science
Member of Davidson County Community College's Networking Advisory Committee
Member Hardware/Software Committee Davidson County Community College
Networking/Computer Advisor to The Children's Home, Winston-Salem, NC
Organizer of Edgecombe Community College Computer Society
Faculty Advisor and Organizer: Mathematical Science Club, Gardner-Webb University
Volunteer: Math Hot-Line, Shelby City Schools
Served on Computer Search Committee, High Point University
Alumni Graduate Recruiter: Department of Mathematics and Computer Science,
Western Carolina University
Member Graduate Student Association, Western Carolina University

Research Interests:

Cybersecurity, Algorithms, Hamiltonian Cycles in Directed Near-Cayley, and vertex transitive graphs, Concurrency Formalisms and Interpretation and Analysis of Social Networks,.

Scholarly and Professional Activity:

Professional Awards

2004 elected Fellow of [Institute of Combinatorics and its Applications](#)
1999 recipient of [NISOD](#) excellence in teaching award

Grants

2017, Principle Investigator: Cyber Security Consortium Pipeline, NNSA, \$1,657,638.
Responsibilities include: recommending students for internships at the National Labs (Lawrence Livermore and Sandia), Lead instructor of annual Linux boot camp, Tracer FIRE (Forensic Incident Response Exercise) cyber security exercise.
2013, Co-Principle Investigator: Cyber Security Pipeline, NNSA, \$73,148. Responsibilities include: Lead instructor of annual Linux boot camp.
2012, Co-Principle Investigator: National Science Foundation TUES award for "Computing in Context", \$199,244.
2009, Intel Corporation Parallel Education development grant, \$10,000.
2009, Co-Principle Investigator: National Reconnaissance Office award for "An Ontology-based Assistant for Analyzing Individuals' Activities", \$99,991.
2008-2010, Co-Principle Investigator: National Science Foundation SGER award for "[Software Design, Development Teams Tournament](#)", \$179,860.

2007-2009, Principle Investigator: National Science Foundation C-PATH award for “Living In the KnowlEdge Society workshop: Concepts and Paradigms for the Knowledge Society Workshop”, \$289,999.

1999 Challenge Grant (Davidson County Community College), \$4,500.

Refereed Publications

1. Hamiltonian Cycles in $C_n X_2 C_m$, [Congressus Numerantium](#) 76(1990), 167-171.
2. Hamiltonian Cycles in $C_n X_s C_m$, [Congressus Numerantium](#) 83(1991), 213-221.
3. Hamiltonian Cycles in $C_n X_2 C_m$, [Congressus Numerantium](#) 95(1993), 131-142.
4. Hamiltonian Cycles in $C_n X_s C_m$, [Congressus Numerantium](#) 101(1994), 209-216.
5. Hamiltonian Cycles in $C_m X C_n$, [Congressus Numerantium](#) 121(1996), 97-103.
6. Hamiltonian Cycles in $C_n X_{2:2} C_m$, [Congressus Numerantium](#), 147(2000), 145-151.
7. On the Digraph $P(n,k)$, [Congressus Numerantium](#), 155(2002), 89-93.
8. Generating Cycles in the Digraph $P(n,k)$ An Algorithm, [Congressus Numerantium](#) 162(2003), 129-137.
9. On Hamiltonian Cycles in $C_n X C_m - RT_k$ [Congressus Numerantium](#) 170(2004), 129-141.
10. On Hamiltonian Cycles in $C_n X C_m - S_m$. [Congressus Numerantium](#) 176(2005), 175-189.
11. More on Hamiltonian Cycles in $C_n X C_m - S_m$. [Congressus Numerantium](#) 179(2006), 129-138.
12. Sufficient conditions for Hamiltonian Cycles in $C_n X C_m - S_m$. [Congressus Numerantium](#) 186(2007)117-128.
13. Hamiltonicity of $C_n X C_m$ After a Single Push. [Congressus Numerantium](#) 190(2008), 87-96.
14. Hamiltonicity of $C_n X C_m$ After a 2-skip row. [Congressus Numerantium](#) 218(2013), 85-92.
15. Hamiltonian cycles in $S_t(C_n \times C_m)$, [Congressus Numerantium](#) (to appear).

Conferences and Talks

1. Forty-ninth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2018*.
2. CECOR annual meeting and assessment at Norfolk, VA, February 2017.
3. Malware Reverse Engineering Workshop at Atlanta, GA, January 2016.
4. MSIPP technical meeting at Miami, FL, November 2016.
5. Computing in Context Workshop at Asheville, NC, June 2016.
6. Forty-fifth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2014*.
7. Forty-fourth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2013*.
8. Intel sponsored presentation on Parallel programming at the undergraduate level, SIGCSE, Raleigh NC. March 2012*.
9. International Conference for High Performance Computing, Networking, Storage and Analysis, Salt Lake City, UT, 2012.
10. SIGCSE Conference, Intel sponsored exhibitor, Dallas, TX, 2011*.
11. International Conference for High Performance Computing, Networking, Storage and Analysis, Seattle, WA, 2011, LittleFe project.
12. Intel Developer Forum, San Francisco, CA, September 2010.
13. NSF CISE Pathways to Revitalized Undergraduate Computing Education (CPATH) PI Workshop, Arlington, VA, November 2008*.
14. LIKES workshop at Virginia Tech, Blacksburg, VA, October 2008*

15. An A+ Schools Program “Best Practices “Conference, UNC-G, Greensboro, NC, August 2008*
16. LIKES workshop at North Carolina A&T State University, Greensboro, NC, April 2008
17. Thirty-ninth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2008*
18. Thirty-eighth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2007*
19. Thirty-seventh Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2006*
20. Thirty-sixth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2005*
21. Thirty-fifth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2004*
22. Thirty-fourth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2003*
23. Thirty-third Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2002*
24. The 26th Annual Meeting of the SIAM-SEAS 2002, Western Carolina University, Cullowhee, NC, April 2002*
25. Thirty-first Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March 2000.*
26. Thirtieth Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, March, 1999*.
27. Twenty-seventh Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Louisiana State University, Baton Rouge, Louisiana, February 1996.*
28. Twenty-fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida, March 1994.*
29. Twenty-fourth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida, February 1993.*
30. Cumberland Conference on Combinatorics and Graph Theory, Emory University, Atlanta, Georgia, May 1991.
31. Southeastern Regional Meeting, SIAM, Western Carolina University, Cullowhee, North Carolina, April 1991.
32. Twenty-second Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Louisiana State University, Baton Rouge, Louisiana, February 1991.*
33. North Carolina Council of Teachers of Mathematics Meeting, High Point, North Carolina, September 1990.
34. Twenty-first Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida, February 1990.*
35. Mathematical Association of America Southeastern Regional Meeting, Davidson College, Davidson, North Carolina, March 1990.
36. Mathematical Association of America Southeastern Regional Meeting, University of Tennessee, Knoxville, Tennessee, March 1989.*

* Denotes when presentations were given.

Curriculum Development

Developed the following courses and or course material at North Carolina A&T State University for the following undergraduate courses

1. COMP 180: Discrete Structures.
2. COMP 285: Design and Analysis of Algorithms.
3. COMP 365: Programming Methodologies.
4. COMP 450: Operating Systems.
5. COMP 469: Parallel Programming.
6. COMP 590: Operating System Administration.
7. COMP 590: Network Science.
8. COMP 590/690: Web Science.
9. COMP 321: Computing Security.

Graduate Advisor

George Glenn, Master's Project: "Host based detection of pass the hash attacks", Summer 2018.

William Hetchley, Master's Thesis: " Smart Sysmon application for detection computer anomalies", in progress.

Corithian Williams, Master's Thesis: "Trust in Byzantine Agreements using authentication protocols for P2P networks", in progress.

Charles Carrington, Master's Thesis: "Blockchain technology to secure communication between autonomous cars", in progress.

Advising

While at North Carolina A&T State University, I have been assigned to advise approximately between 60 and 100 undergraduates per year.

Senior Project Advisor

Daniel Richardson, Denise Williams "Secure Virtual Network Computing, Virtual Linux on a Window's client" Open Source application currently being used by academic faculty and students here at North Carolina A&T State University as well as I.T. administrators at Western North Carolina Hospitals.

Downloadable at: http://cayley.ncat.edu/carr/ssh_vnc (2006).

Jonathan Jones, Scott Davis, "Secure Virtual Network Computing, Virtual Linux on a Linux client and GUI for Access Control List", Open Source application downloadable at:

http://cayley.ncat.edu/carr/ssh_vnc . (2007).

Darryl Smallwood, Donald Williams "RPM package builder "Open Source Spring (2009). Students also are required to be an active participant in the development of Fedora Projects RPM developer's group.

Marcus Summers (2010) "Customized Linux ISOs based upon Sugar on Stick project".

References

Dr. Joseph B. Klerlein, Professor
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Dr. Robert E. Beck, Professor
Department of Computing Sciences
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Dr. Kenneth A. Williams, Professor
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