

Tiffany M. Barnes
Department of Computer Science
University of North Carolina at Charlotte,
9201 University City Blvd., Charlotte, NC 28223
<http://www.cs.uncc.edu/~tbarnes2/>

Professional Preparation

North Carolina State University	Computer Science & Mathematics	B.S.	1995
North Carolina State University	Computer Science & Mathematics	M.S.	2000
North Carolina State University	Computer Science	Ph.D.	2003
North Carolina State University	Computer Science	Postdoc.	2004

Appointments

- Assistant Professor, Computer Science, University of North Carolina at Charlotte, August 2004-Present.
- Postdoctoral Researcher, Computer Science, North Carolina State University, January 2004-August 2004.
- Distance Education Course Developer and Instructor, Computer Science, North Carolina State University, since January 2002.
- Technical Director – Girls on Track Summer Program, Computer Science, North Carolina State University, Summers 2000-2004.
- Research Assistant, Computer Science, North Carolina State University, August 1996 – December 2003.

Publications

Most Relevant

1. Barnes, T., D. Bitzer & M. Vouk, “Experimental analysis of the q-matrix method in knowledge discovery,” To appear in Proceedings of the 15th International Symposium on Methodologies for Intelligent Systems, Saratoga Springs, NY, May 25-29, 2005.
2. Barnes, T., & D. Bitzer, “Fault tolerant teaching and automated knowledge assessment,” Proceedings of the 40th Annual ACM Southeast Conference (ACMSE'02), Raleigh, NC, April 27, 2002, pp. 125-132.
3. Berenson, S.B., M. Droujkova, L. Cavey, N. Smith, & T. Barnes. “Girls on Track with information technology” Meridian, 3 (1), Winter 2000.
Online: [<http://www.ncsu.edu/meridian/2000wint/math/index.html>].
4. Cavey, L., & T. Barnes, “Mathematics teachers on track with technology - Problem-based mathematics teacher preparation,” Proceedings of the 12th International Conference of the Society for Information Technology & Teacher Education (SITE 2001), Orlando, FL, March 8, 2001, pp. 1343-1347.
5. Knight, V., L. Cavey, T. Barnes, & N. Smith, “Girls on Track: Middle grade girls modeling community problems - An experiment in progress,” Presented at the Joint Mathematics Meetings of AMS-MAA-MER, Washington D.C., January 2000.

Other Publications

1. Cavey, L., T. Barnes, N. Smith, & M. Droujkova, “Mathematical explorations of urban problems,” Presentation at the Joint Meeting of School Science and Mathematics and the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 1999.

2. Barnes, T., L. Cavey, & N. Smith, "Girls on Track: Using technology as a tool for community investigations," Paper presented at the Annual Technology Exposition, North Carolina State University, Raleigh, NC, September 2000.
3. Barnes, T., R. Ramanujam, L. Ponnala, D. Bitzer, M. Vouk, & A. Stomp. "Signal processing characteristics as indicators of protein translation in prokaryotes," Submitted to the 13th International conference on Intelligent Systems for Molecular Biology, Ann Arbor, MI, June 25-29, 2005.
4. Ponnala, L., T. Barnes, D. Bitzer, & M. Vouk, "Ribosome tail ends as 'signal detectors' for protein production in prokaryotes," Proceedings of the IEEE "Technology for Life" NC Symposium on Biotechnology & Bioinformatics (Tech4Life), Raleigh, NC, October 13-15, 2004.
5. Ponnala, L., T. Barnes, D. Bitzer, & M. Vouk, "The search for the optimal 3' tail end in E. coli." Proceedings of the 26th Annual Intl. IEEE Engineering in Medicine and Biology Conference (EMBC), San Francisco, CA, September 1-5, 2004.

Synergistic Activities

1. Founding member of NCSU Women in Computer Science (2003): A student and faculty organization created to provide networking and mentoring opportunities for women and people interested in diversity in technology fields. Current member of the UNCC College of Information Technology Diversity Committee, committed to improving the recruitment and retention of underrepresented groups in IT.
2. President of the NCSU Computer Science Graduate Student Association, 1999-2002: Revived this student organization and organized a Graduate Student Speaker Series.
3. Mentor in the Women in Mathematics program in Wake County, which provides talented 8th grade girls with mentors in math, science, and technology related fields and encourages girls to excel in mathematics and learn about career opportunities in math-related careers (1998-2001 and 2003-2004).
4. Graduate Fellow and Pedagogy Research Group Leader in the Hewlett Initiative program at NCSU to study how to enhance active learning in undergraduate education, 1997-1999. Our group designed and implemented a student handbook of active learning which is online at www.ncsu.edu/learn.
5. Graduate Teaching Workshop Organizer and Speaker for the NCSU Faculty Center for Teaching and Learning programs to prepare new graduate students for teaching, selected for developing innovative methods for teaching and office hours, 2000-2003. Also volunteered to design, and presented a Problem Solving Workshop for Supplemental Instruction at NCSU (2000).

Collaborators

Sarah Berenson, Donald Bitzer, Laurie Cavey, Maria Droujkova, Virginia Knight, Jeff Ligon, Lalit Ponnala, Rathnakumar Ramanujam, Nancy Smith, Anne Stomp, Mladen Vouk

Graduate and Postdoctoral Advisors

Donald Bitzer & Mladen Vouk, Dept. of Computer Science, North Carolina State University

Graduate Thesis Advisees (Total 3)

Lalit Ponnala, North Carolina State University

Theodore Carmichael & Shilpa Sharma, University of North Carolina at Charlotte