

Summations

Department of Mathematics and Statistics Newsletter

Spring 1999



Maria L. Blanton

Alumna Teaching at Dartmouth

Maria L. Blanton earned the B.A. in mathematics with secondary certification (summa cum laude, 1989) and the M.A. in mathematics in 1991 from UNC Wilmington. While at UNCW she earned the Adrian D. Hurst Award, the Fred Toney Scholarship Award, the B.D. Schwartz Graduate Fellowship, and a Graduate School Research Grant. She then taught mathematics for one year as an instructor at UNCW while she extended and published results from her master's thesis in control theory. She began graduate study at NCSU in 1992 with a NC State University Alumni Fellowship. While at NCSU she was selected as an Outstanding Teaching Assistant (1995), was presented the Outstanding Student Manuscript Award (1996) and served as Research Assistant (1994-1998) with the Director of the Center for Research

in Mathematics and Science Education. She completed the Ph.D. degree in mathematics education with a minor in mathematics in 1998 and is now assistant professor of mathematics education at the University of Massachusetts, Dartmouth. She has 13 articles in refereed journals and conference proceedings and has authored five technical papers. Dr. Blanton is a member of Kappa Delta Pi, Pi Mu Epsilon, Phi Kappa Phi, Phi Eta Sigma, the American Educational Research Association, the National Council of Teachers of Mathematics and the North American Chapter of the International Group for the Psychology of Mathematics Education. In September she was awarded the NC Association for Research in Education Distinguished Paper Award.

Full-Time Faculty

- Dr. Jeffrey Brown
- Ms. Sandra Carlson
(Math Lab Director)
- Dr. Yaw O. Chang
- Dr. Thaddeus Dankel
(Graduate Coordinator)
- Dr. Karin Deck
- Dr. William Etheridge
- Dr. Wei Feng
(Assistant Chair)
- Mrs. Terry Fleck
- Dr. Dargan Frierson
- Dr. Kenneth R. Gurganus
(Undergraduate Coordinator)
- Dr. Russell Herman
- Dr. John Karlof
- Dr. Subramanyam Kasala
- Dr. Mark Lammers
- Dr. Xin Lu
- Dr. Gabriel Lugo
- Dr. Sandra McLaurin
- Dr. Ibrahim Sadek
- Dr. Shiva K. Saksena
- Dr. Paul Shotsberger
- Dr. Douglas D. Smith *(Chair)*
- Dr. Karan Smith
- Dr. Kenneth Spackman
- Mrs. Karen Spike
- Dr. Matthew TenHuisen
- Dr. Ram Vedantham

In Their Footsteps



Thomas P. Brown Sr.

Assistant Professor Emeritus Thomas P. Brown, Sr. retired from full-time teaching in 1993 and continues to teach part time. His career at UNCW spans a period of 41 years, beginning with his appointment at Wilmington College in 1958. He earned the B.A. at UNC Chapel Hill and the M.A. in mathematics at ECU. For many years he split his duties between teaching and administration, holding such positions as dean of men and director of student financial aid. Mr. Brown taught mathematics courses at all levels, played a major role in advising prospective secondary teachers and supervising their practicum work, and directed the High School Math Contest for 12 years.

Mr. Brown has two sons who completed their degree in mathematics at UNCW. Thomas P. Brown, Jr. completed his B.A. degree with certification in secondary mathematics in June 1967. After completing his degree, Thomas (Preston) served in the military and retired as a captain in the army. During his military career, he received his Master's Degree in Education. David Kirk Brown completed his B.S. degree in 1972. Kirk worked at the Bank of North Carolina for four years before returning to UNCW to receive his certification in secondary mathematics. Thomas and Kirk are currently members of the mathematics faculty at Lakeside in Wilmington.

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Greetings from the Undergraduate Coordinator



Kenneth R. Gurganus
Undergraduate Advisor

Welcome to N 34° 13.676' W 77° 52.360'. These coordinates, within a few meters, mark the location of the front of Bear Hall, home of the Mathematics and Statistics Department. Advancing technology has incorporated and made invisible to the casual user most of the mathematical algorithms that allow one to precisely triangulate the position of Bear Hall on the earth by the use of global position satellite navigation. On the other hand, computer technology allows current undergraduate mathematics students to perform calculations and to view mathematical phenomena that were unobservable in the undergraduate program of a few years ago. In a sound undergraduate program, such as we strive to maintain at UNCW, technological aids do not replace or obscure student understanding of the mathematical principles involved in the use of technology.

UNCW mathematics undergraduates from all eras will still recognize the applied and pure components of calculus/analysis, algebra and geometry in the current program. While nearly half of our current undergraduate degrees are from the B.A. teacher certification program, the B.A. degree and the B.S. degree with tracks in

mathematics, applied mathematics, operations research and statistics remain popular options. All of these programs require an introductory computer science course. Mathematics students have long received advice to broaden their mathematics training with additional courses in operations research, statistics and computer science. Our students are fortunate in that such instructional as well as research expertise is found within our own department and our sibling Department of Computer Science.

Visit us in person at N 34° 13.676' W 77° 52.360' or at our Web site. It is an exciting time to be a mathematics student. To illustrate this point we recommend the following addition to your list of books to read soon: *The Language of Mathematics: Making the Invisible Visible* by Keith Devlin (1998 W. H. Freeman and Co.). In 300 pages made short by brilliant writing, Devlin takes the lay reader from the Sumerian development of numerals in 6000 B.C. to Andrew Wiles' publication in 1995 of the solution of Fermat's last theorem, and to the combination of probability and calculus in the work of Scholes and Merton on financial derivatives that led to their receiving the 1997 Nobel Prize in economics. Read about the contributions physics made to geometry in a fascinating discussion of the role of mathematics in the physical theories of Seiberg and Witten in the 1990's. The professional expertise of faculty in our department extends to all of these areas of mathematics.

Let potential students know that UNCW is the place to learn mathematics.



Kenneth R. Gurganus
Undergraduate Coordinator

In Their Footsteps continued

Assistant Professor Emeritus Thomas R. Lupton retired in 1995 after 37 years of full time teaching and has continued to teach on a part time basis. He earned B.S. and M.A. degrees in mathematics at East Carolina University. He taught almost every 100 and 200 level mathematics course offered and several upper level courses along with many extension courses. He has served numerous leadership roles, including the position of night dean, and continues to be active in community and church service.

Mr. Lupton's daughter Whitney Blair Lupton Weaver received her B.S. in mathematics from UNCW in December 1987. She

received three awards for scholastic achievement in mathematics, the Adrian D. Hurst Award for the 1984-1985 year and the Barbara Pridgen English Memorial Award for the 1987-88 year, and was a Fred Toney Scholar in 1986. Whitney has been working at DuPont in Leland since her graduation and has used her education in mathematics and statistics in her positions there. She is currently working in quality control as a measurement/planning specialist.



Thomas R. Lupton
& daughter, Whitney

MATH FUN

Can You Solve This?

$$x + \frac{1}{x} = 5$$

Find the Value of

$$x^4 + \frac{1}{x^4}$$

solution in fall 1999 edition

International Student Fund

The master's program in mathematics is strengthened by the presence of international students who have strong mathematics backgrounds and diverse work experiences. We have had students from China, Mexico, Thailand, and Wales. Unfortunately, it is often difficult for international students to afford tuition and living expenses associated with study at UNCW even with a teaching assistantship.

The Mathematics and Statistics International Graduate Student Fund was established last fall to help support these talented and well-qualified students. We were very pleased to receive generous support for this fund beginning with the first gift from Anning Zhu and Yajin Gu of Ballwin, Missouri. Because of their generosity, we were able to name Mr. Hongtao Xu as the first recipient of support. Hongtao, who is from the People's Republic of China, has studied engineering and worked as an engineer and in software development. He is now concentrating his study in the area of optimization.

After we announced the fund we heard from Charlie Hu, M.S. '95 and Wenlan Lu, M.S. '96, who live in Raleigh. Charlie Hu is a software engineer at IBM in the Research Triangle Park. Wenlan Lu is a senior specialist in software development and support at Northern Telecom. They wrote "The education we got from UNCW helped us fulfill our American dream. We decided to donate \$3,000 to the Mathematics and Statistics International Graduate Student Fund to show our great appreciation." This gift is eligible for a matching gift from Northern Telecom.

From our students and the faculty-many thanks to our donors!

College Algebra Online

By Jeff Brown

In the fall of 1998 our department started offering a section of Math 111 on the internet. Students in this course still come to campus for tests, but there are no class lectures. Instead of going to class, students logon to the Web site devoted to the course. There is a discussion forum where they post questions, answer questions, arrange meetings for study groups, gossip, gripe, and carry on like students!

The course is hosted by the Collegis company, which maintains the web site and manages the database that holds the discussion forum messages and other course materials. The tools provided by Collegis also let students turn in assignments online, browse the lesson pages and use an online course library. The only software the student needs is a Web browser.

The mathematical content of the course is stored in the lesson pages that I wrote with Russ Herman. These pages contain explanations, examples, and exercises, as well as quite a few interactive programs that students use to experiment with mathematics. There are online graphing calculators and other java applets, as well as animations and toolbook applications.

So, how well does this approach work for the students? It is still true that you get out of a project what you put into it. The students who have the discipline necessary to make themselves logon and work through the material have done very well, but this format is not for everyone. Many students need the structure of fixed meeting times, and penalties for missing class. However, for some this format is a lifesaver. Students who work full time or live quite a distance from campus, or those whose brains work best at 2 a.m are delighted to have the option of taking courses on the Web.

If you would like to see some of the course materials, then point your Web browser to <http://www.uncwil.edu/courses/mat111hb/demo>.

To see demonstration sites for all of UNCW's online courses, go to <http://www.uncwil.edu/online> and click the Current Courses link.

Summations

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University of North Carolina at Wilmington

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Alumni! We want to hear from you!

Name: _____
Dr./Mr./Mrs./Miss/Ms. First Middle Maiden Last Suffix

Address: _____
Street/PO Box City State Zip Code

Phone: Home () _____ Work () _____ E-Mail _____

Employer: _____ Position _____

_____ Street City State Zip code

Grad. Date: _____ Degree/Major: _____

Alumni News! Send your update to: summations@uncwil.edu or complete our form on the web at www.uncwil.edu/alumni/keepintouch.html.

Yes, I want to support the UNCW Mathematics and Statistics Department!

Enclosed is my gift of \$ _____ made payable to UNCW

Please direct my gift to:

- Mathematics and Statistics Trust Fund** **Crews Scholarship Fund**
(supports student awards, guest speakers and other needs)

- Toney Scholarship Fund** **International Student Graduate Fund in Mathematics and Statistics**

Return to: UNCW Advancement Services

The University of North Carolina at Wilmington
601 South College Road
Wilmington, NC 28403-3297

credit card information:

Visa Master Card • exp. date: _____
 card no.: _____
 name on card: _____
 signature: _____

*This gift qualifies as a charitable donation.
Thank you for your consideration and generosity.*



Help Needed!

Community Tutors: Here's a chance for alumni of the Mathematics and Statistics Department to give back to the community. If you live in Wilmington or the surrounding areas, you are needed to tutor middle and high school students in mathematics. The Math Lab receives many calls each semester from parents of public school students asking for names of tutors for their son or daughter. The recently adopted block scheduling in high schools has created an even greater demand for mathematics tutors. *If you are interested, contact Sandy Carlson, Math Lab Director, at 962-3885 (or 962-7215 and leave a message on voice mail) to register as a tutor. You set your own hours and rate of pay.*

Why not consider helping our local students? You can make a difference!

Alumni News

- Beth Daughety Andrews '93 graduated with a B.A. with secondary teacher certification and is currently employed at Craven Community College as a math instructor. She received her M.Ed. in mathematics from East Carolina in 1998.
- Theresa Fay Carroll '92 is teaching at South Brunswick High School. She is currently one of our partnership teachers working with a senior intern. Theresa was selected as teacher of the year at South Brunswick High School for 1997-1998.
- Jennifer Bess Dudley, senior math major, competed in the 1998 Virginia Tech Math Contest. She ranked 30th among 186 contestants from 34 institutions from eight states. Three other students also participated from UNCW.
- Michele Kocher '94/'96 is employed at PPD. Prior to her employment at PPD Michele lectured at Cape Fear Community College and UNCW. Michele received her B.A. degree(cum laude) in 1994 and her M.A. in mathematics in 1996.
- Whitney Lupton '87 was married to John E. Weaver on December 12, 1998. Whitney is employed at DuPont. The couple resides in Wilmington.
- Cindy Brown Mucci '82 lives in Columbia, Maryland with her husband Dave. She is a computer specialist with Computer Science Corporation in Greenbelt, Maryland.
- Lucy Page '98 is teaching at West Carteret High School.
- Jack P. Townsend '98 is teaching at Topsail High School. He married Susan DeVictor Dec. 19, 1998. Susan is also a UNCW alumna.
- Sara White '97 is working on her M.A. in math education at UNCC.

News Briefs

- Dr. Yaw Chang spent one semester (fall 1998) participating in the special program on the "Foundations of Computational Math" held at the Mathematical Sciences Research Institute of the University of California, Berkeley.
- Dr. J. Marshall Crews, professor emeritus of mathematical sciences since 1981 and former registrar, dean of students, academic dean and director of admissions, has just completed a draft of an autobiographical work about his youth in the Tennessee countryside. This work complements his first book, *From These Beginnings*, about the history of Wilmington College from 1946-1969.
- Col. Glenn Long retired from the USMC in 1965 after sightseeing the Pacific Islands with the government during WWII and later assisting the Joint Chiefs of Staff. A year later he was in service again with this department at UNCW. After retiring from UNCW in 1983, Col. Long continued to occasionally teach mathematics here although four great grandchildren have more of his attention now.
- Carl Nelson, retired statistics lecturer, tutors in the Math Lab approximately six hours a week. Mr. Nelson taught at UNCW for 11 years. He has tutored in the Math Lab since his retirement in 1988.

An EEO/AA institution. 600 copies of this public document were printed at a cost of \$552.84 or 92¢ per copy (G.S. 143-170.1).

