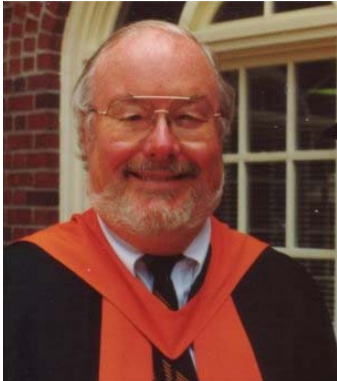


Summations



The **Thad Dankel** Mathematics Scholarship Endowment was initiated by colleagues, friends and family on November 3, 2005. The scholarship honors the 33 years that Dr. Dankel devoted to the Mathematics and Statistics Department at the University of North Carolina Wilmington. Dr. Dankel, age 62, died on November 10, 2005, at Duke University Medical Center, of complications following kidney transplant surgery.

When Dr. Dankel joined the faculty in 1971, after earning the B.S. at Duke University and the M.A. and Ph.D. at Princeton University, he was one of only eight faculty in the Mathematics Department. As an applied mathematician, Dr. Dankel's areas of interest have been applied stochastic processes, differential equations and mathematical physics. He published numerous papers, was a member of several professional and honorary societies, and taught many upper level or graduate courses in applied math-

ematics and analysis, including special topics courses on Hydrodynamics, Water Waves and Ocean Circulation. He directed three master's theses at UNCW and several undergraduate honors and research projects. He served as graduate coordinator in the department until his retirement.

"I have always been impressed by his broad range of knowledge and interests in mathematics," says current Mathematics and Statistics Chair, **Wei Feng**, "Many of us also knew Thad as a colleague who cared about the well-being of others." The Dankel Scholarship will be a way for him to continue to reach out and help students who seek Mathematics as a major.

Dr. Dankel was unavailable to receive the certificate announcing the scholarship in person due to health issues, but his wife, Susan, was on hand to receive the honor. "Thad would be thrilled to see this and to know that there will be something to help students carry on in this work".

The effort to raise the \$30,000.00 endowment is well underway with pledges coming in from friends, colleagues, alumni, and family. Once endowed, it will be the third endowed scholarship specifically for the Mathematics and Statistics Department. If

you would like to give, contact the University Advancement office or fill in our easy to use online giving form at <http://www.uncw.edu/uniadv/documents/giftform2.pdf>

Dargan Michael W. Frierson, son of **Virginia Wright-Frierson** and Professor of Statistics **Dargan Frierson**, received the PhD degree in Applied Mathematics at Princeton University in July, 2005. His dissertation title was "Studies of the General Circulation of the Atmosphere with a Simplified Moist General Circulation Model", written under the direction of Dr. Isaac Held at the Geophysical Fluid Dynamics Laboratory. He is shown here following his graduation ceremonies in June, 2006, wearing Dr. Thad Dankel's Princeton doctoral regalia, given to him by Susan Dankel. The new Dr. Frierson carries on Thad's interests in mathematics,



Michael Freeze, Associate Professor, Ph.D. UNCW Chapel Hill 1999



I came to UNCW in the Fall of 1999 as a visiting assistant professor, having just received my Ph.D. from UNC Chapel Hill. It has been interesting to observe the growth of Wilmington and the University these past seven years, and rewarding to participate in the concomitant changes resulting from this growth. At UNCW, I have taught courses ranging from College Algebra at the undergraduate level to Number Theory at the graduate level and have had the privilege of guiding a few honors courses in Calculus as well.

My research program concerns lengths of factorizations in number rings and their generalizations. Unlike the integers, which enjoy the property of unique factorization into products of primes up to order of the factors and units, generalized integers may be factored as products of irreducibles in many ways. The combinatorial classification of the constituent parts of these irreducibles provides insight into the length variation of the factorizations. Most of my work consists in translating arithmetic algebraic problems into suitable combinatorial forms which may be analyzed using tools from allied mathematical disciplines such as additive number theory, combinatorial group theory and topological graph theory.

As a faculty member at UNCW, I have served on the College of Arts and Sciences Curriculum Committee and the University Curriculum Committee. For the past two years, I have served as the departmental Undergraduate Coordinator by representing the department at student visitation programs and by advising new majors and transfer students.

Faculty Achievements



Dr. Gabriel Lugo received a 2006 Distinguished Teaching Professorship Award at the Fall Faculty Meeting. The award recognizes “faculty members who have made a profound contribution to higher education through their dedication and service to students.” Recipients receive a medallion to wear at University Convocations and Commencements and a stipend of \$5,000 per year for three years. He becomes the third member of the department to win this prestigious award (**Dr. K. Spackman** 1994-1997 and **Dr. R. Herman** 2005-2007).

This award is in addition to the 2006 Chancellor’s Teaching Excellence Award he received in May. The Chancellor’s Teaching Excellence Award was established in 1991 to recognize all aspect of excellence in teaching and teaching-related activities that foster students’ desire for lifetime learning and success.

Dr. Lugo was one of three UNCW faculty nominated for the U.S. Professors of the year Award Program in 2005. This program was created in 1981 to increase awareness of the importance of undergraduate instruction at all types of higher education institutions. The program recognizes faculty members for their achievement as undergraduate professors. The Council for Advancement and Support of Education (CASE) began the Professors of the Year program with the Carnegie Foundation hosting the final round of judging. Only two UNCW faculty have received the State award: **Richard Huber** in 2002 and **Carole Tallant** in 2004. Then in 2006, **Dr. Russ Herman** was nominated for the award.



Faculty Achievements Continued....

Each semester, the Division of Student Affairs asks graduating seniors to identify faculty and staff emmbers whose impact on them was significant during their undergraduate or graduate years. Congratulations to the following colleagues for being named by the May 2006 graduating class: **J. Blum, K. Gurganus, R. Herman, S. Kasala, G. Lugo, S. Simmons, D. Smith, M. TenHuisen, J.D. Terry,** and **B. Young.**

Congratulations to **Yaw Chang** (PI) and **Xin Lu** (Co-PI) for receiving the NSF grant DMS0604813 in the amount of \$18,000. Project title: The AIM's Sixth International Conference on Dynamical Systems and Differential Equations.

Congratulations to the following colleagues on their promotions (effective August 1, 2006): **Daniel Guo** - associate professor with tenure, **Russ Herman** - full professor, and **Mark Lammers** - associate professor with tenure.

UNC Board of Governors Award for Teaching Excellence

The Board of Governors of the 16-campus University of North Carolina has selected **Russell L. Herman**, an associate professor of mathematics at University of North Carolina Wilmington, as an Excellence in Teaching 2006 winner. During a recognition luncheon held in conjunction with the Board's May 12 meeting, a faculty member from each UNC campus received a commemorative bronze medallion and a \$7,500 cash prize.

The 16 recipients, representing an array of academic disciplines, were nominated by special committees on their home campuses and selected by the Board of Governors Committee on Personnel and Tenure, chaired by Charles Mercer of Raleigh. UNC President Erskine Bowles and Board of Governors Chairman J. Bradley Wilson of Cary will present the awards.



At UNCW, students in his mathematics and physics classes describe Herman as “the tough teacher that you have to take,” a professor who is also known to be caring, demanding, fair, and hardworking. Among the keys to his success are being accessible to students, providing timely feedback, knowing all his students by name, and believing that learning takes place “when students actively explore the course material both in and out of the classroom.” One of the earliest adopters of technology to improve teaching and learning, he has developed software for graphing and analysis in science and mathematics courses and has presented numerous workshops on teaching science and math. In addition, Herman has been active at UNCW's Center for Teaching Excellence and in programs for K-12 teachers and students offered by the Science and Math Education Center and the NC Partnership for Improving Mathematics and Science.

A faculty member at UNCW since 1990, Herman has also received the 2005 Chancellor's Teaching Excellence Award, the 2005 Distinguished Teaching Professorship Award and has recently been promoted to full professor of mathematics. He holds a bachelor's degree in mathematics from Empire State College, a master's degree in physics from Temple University, and a master's degree in mathematics and a doctoral degree in physics from Clarkson University.

Established by the Board of Governors in April 1994 to underscore the importance of teaching and to reward good teaching across the University, the awards are given annually to a tenured faculty member from each UNC campus. Winners must have taught at their present institutions at least seven years. No one may receive the award more than once.



Jr. Seahawk Summer Academy

Jr. Seahawk Academy is an enhancement program designed to address the needs of middle school youth. In this program, students from all backgrounds are provided the opportunity to experience math, science and technology in new and inventive ways that go beyond the traditional classroom setting. The program empowers students to become engaged in structured, highly interactive, technologically enhanced, but most of all activities aligned with the North Carolina Standard Course of Study for mathematics and science.

In its second year, Jr. Seahawk was held during the week of July 10th-14th and had 80 daily participants ranging in age from 10-14, grades 5-9. This year **Dr. J. Denise Terry**, the Academy Director, was able to have more UNCW students to work with Jr. Seahawk. The staff consisted of:

Director

Dr. J. Denise Terry

Assistant Director

Shannon Gunter (recent Master's graduate)

Math Teachers

Holly Carter (Master's student)
Laura Libero (recent graduate of Middle School Education)
Jacqi Henry (graduate student)
Caroline Greenough (graduate student)

Science Teachers

Erin Sprill (graduate)
Diane Abram (Science Education undergraduate student)

Teacher Assistants

Jennelle Grier (high school student)
Toni Terry (high school student)
O'Bryant Henry (high school student)

Jr. Seahawk operates from student fees, private donations from faculty and various UNCW departments

(i.e., Campus Diversity, Watson School of Education). Some materials and supplies used were provided by the UNCW Science and Math Education Center. This year Jr. Seahawk partnered with New Hanover High School to incorporate an Algebra I Institute for eighth and ninth grade students. Texas Instruments loaned calculators and data collection equipment and donated a new TI-84+ Silver Edition calculator which was awarded to a Jr. Seahawk Academy participant.

This year the student's activities were centralized around the following themes.

Monday

"The Amazing Race"

Tuesday

"The Math and Science of Medicine"

Wednesday

"Environmath and Natural Science"

Thursday

"Through Your Ize: Hypothesize, Analyze, Synthesize"

Friday

"Project Day"



A student uses a balance to measure the mass of dirt.

The week was packed full of activities such as a campus scavenger hunt, a crime scene investigation, and even a visit by the chancellor, **Dr. Rosemary DePaulo**. The finale for the week was a trip to the Carolina Beach State Park where the students had an opportunity to get hands on experience with nature using math, science and technology.



Students measuring blood splatter as a part of the crime scene investigation

Student News

Emilea Grove and **Kristin Hains** received funding to attend the Joint Statistics Meeting in Seattle. Emilea received her funding through the graduate school and presented a talk entitled *Analyzing a Complex Metabolomics Data Set*. Kristin received her funding through CSURF.

Alumni News

Kathleen Karlon '06 received funding from the Graduate School and from research sponsored by the Department of Defense to attend the Hawaii International Conference on Statistics in Honolulu, Hawaii. She presented work from her thesis on Dynamic Linear Models for Forecasting. Kathleen completed her Master's in the summer in and is currently working for the Federal Government in Washington, D.C.

Maria L. Blanton BA '89 '91 and husband **Kevin Brekka** are pleased to announce the birth of their daughter **Carter Patricia Brekka** on January 13, 2006. Maria is currently an associate professor of mathematics education at the University of Massachusetts Dartmouth.



Technology Innovations in Math Education

UNCW is collaborating with Texas Instruments to develop a technology-enhanced learning resource center for math education. TIME-Technology Innovations in Mathematics Education, located on the UNCW campus, will bring state-of-the-art technology and highly qualified professional development to students and teachers in their 10 county PDS system. This environment will provide exposure, awareness, understanding, and proficiency of the effective use of technology in mathematics classrooms. This Center is designed to enhance the teaching and learning of mathematics at all levels with the effective use of technology. A goal of the TIME center will be to increase student achievement by providing teachers with opportunities to become knowledgeable of best practices that will better serve their students. Our center will be equipped with instructional technology, including TI-84+ SE, 73, 10, and 15 calculators and TI-Navigators, current publications and resources, and instructional aids (manipulatives). It will be located in the Department of Mathemat-

tics and Statistics at UNCW where the Secondary Mathematics Education program is housed. A calendar of activities and registration information will be available on our website beginning November 1, 2006. Check the Mathematics and Statistics Department website <http://www.uncw.edu/math> for details.

Summer 2007 Activities*

Probability and Statistics in the Elementary and Middle School Math Classroom (June)
Probability and Statistics in the Secondary Math Classroom (July)
Algebra I Institute
Using the TI-73 in the Mathematics Classroom

Fall 2007 Activities*

Grades 8 – 12 Tutoring Program
Writing Grants for Classroom Equipment
Designing Research Projects
Using the TI-73 in the Mathematics Classroom

Spring 2008 Activities*

Geometry in the Middle School Classroom
Geometry in the High School Classroom

T³ Regional Conference (2007-2008)

*Topics/Dates are subject to change

Battleship North Carolina Collaborative Project

The Secondary Mathematics Education methods students joined the secondary science and social studies students at the Battleship North Carolina for a collaborative project designed to expose students to the effective use of interdisciplinary learning. Students were divided into multi-disciplinary teams to investigate various departments and functions of the Battleship. Afterwards, students were tasked with creating interdisciplinary classroom lessons and activities that incorporated themes and concepts from science and history. Students were encouraged to consider taking their own students on field trips that involve opportunities for interdisciplinary learning.

Teachers Teaching with Technology - T³ Regional Conference

The T³ (Teachers Teaching with Technology) Regional Conference was held March 31 - April 1, 2006 on the University of North Carolina Wilmington (UNCW) campus. The conference was hosted by the UNCW Mathematics and Statistics Department and Texas Instruments. Conference organizers were: **Dr. J. Denise Terry**, chair, **Dr. Farrah Chandler**, co-chair, **Dr. Susan Simmons**, **Dr. Edward Boone**, and **Dr. Nolan McMurray**. The T³ Regional Conference offered a variety of professional development opportunities

that were aligned to meet educational standards and help teachers learn how to easily and effectively integrate technology into their classrooms.

The T³ Regional Conference was honored to have **Dr. Leo Edwards, Jr.** as the keynote speaker. Dr. Edwards is a retired Professor of Mathematics and Director of the Mathematics/Science Education Center at Fayetteville State University. His presentation titled, "7 Habits of Effective Facilitators in Learning", was insightful and inspirational. The con-

ference had a total of 179 teachers from 5 states attend the conference on Saturday, April 1st and 81 teachers to attend the workshops offered on Friday, March 31st.



Student Awards

The following student awards were presented at the graduation on May 13, 2006.

The Adrian D. Hurst Award

The Adrian D. Hurst Award goes to the junior or senior mathematics major with the highest GPA who has done all course work at UNCW. This year's recipient is **Rebecca Hadley Morgan**.

Barbara Pridgen English Memorial Award

The Barbara English Award goes to the graduating senior who has the highest GPA. This year's recipient is **Timothy Ellis**.

The following departmental scholarship winners were recognized at the awards ceremony on April 21, 2006.

Adrian D. Hurst Scholarships

Emilee Billeaud
David Fuchs
Mary Margaret McEachern
Adam Santoro

Fred Toney, Jr. Scholarship

Tracy Hoyle

Carl Nelson Award

Krisitn Hains
Sara Moore

Bookstore Scholarships

Nathaniel Miner
Vivienne Seed

These awards are to honor outstanding juniors or returning seniors in the Mathematics and Statistics Department. Selection is made by a vote of the mathematical science's faculty based on the students' academic achievements, extracurricular activities, and a short paper on the subject of the relationship between the students' education and career plans.



Left to Right: Mrs. A. Carl Nelson, Sara Moore, Kristin Hains and Mr. A. Carl Nelson

Pi Mu Epsilon

Pi Mu Epsilon is the honorary national society for mathematics founded in 1914. Its purpose is to promote and recognize mathematics scholarship among students. The UNC-Wilmington chapter, North Carolina Zeta, was organized in 1974. This years candidates for initiation in March 2006 were:

Russell Bienias
 Emilee Billeaud
 Timothy Ellis
 David Fuchs
 Joseph Griffin
 Monica Lassiter
 Mary Margaret McEachern
 Charles White, II



Left to Right: Charles White, II, Mary Margaret McEachern, Monica Lassiter, Joseph Griffin, David Fuchs, and Russell Bienias.

MATH FUN

Find the area of the region consisting of the points (x, y) of the Cartesian plane satisfying both $|x| - |y| \leq 1$ and $1 \leq |y| \leq 2$.

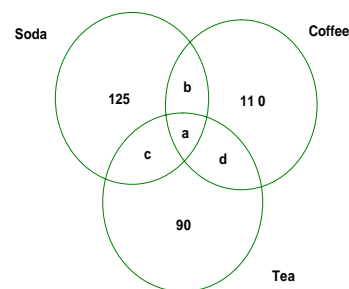
The first correct solution will be recognized in the next edition.

Solution to Fall 2005 Math Fun!

A Venn diagram can be used to solve the problem as shown with the relevant information filled in. Suppose the numbers in the 4 inner regions are a, b, c, d as shown. we need to find a . Now according to the given informaiton we have,

$$\begin{aligned} a + b + c &= 200 - 125 = 75 \\ a + b &= 60 \\ a + c &= 50 \end{aligned}$$

Subtracting the first equation from the sum of the other two we get, $a = 35$. Therefore 35 people in the survey drink all 3 of the drinks.



Alumni Spotlight - Danny Modlin

I was born in Jamesville, NC, an extremely rural town in Northeastern North Carolina. I graduated from a class of 33 students in 1994 and proceeded to Elon College in Burlington, NC under the NC Teaching Fellows scholarship. While at Elon, I spent the spring semester of my sophomore year in London participating in a student exchange program. While there, I had the opportunity to travel and to observe the teaching strategies of their schools.

Upon graduation in 1998, I was employed at C.W. Stanford Middle School in Hillsborough, NC as their 8th grade mathematics teacher. After two years, I moved to Durham, NC and

taught one year at Durham School of the Arts. In 2001, I transferred to Riverside High School and taught there for the following three years. At each of these schools, I was highly involved with the sports program as statistician and Assistant Athletic Director.

In 2004, I stopped teaching and returned to school at UNCW to obtain my masters in mathematics. While here, I served as the Graduate Student Association representative and was founding secretary in the resurrection of the Mathematics and Statistics Club on campus. I was also the creator of the "Snack Store" in Bear Hall. With the removal of the

snack and drink machines from the building, I devised an honor system snack and drink store for the faculty and graduate students. I also headed many of the social activities for the students and faculty, such as bowling and our picnic at Hugh MacRae Park.

After my graduation, I will be continuing my education by attending NC State University for a PhD in Statistics. My ultimate goal is to become a collegiate professor and possibly return as a faculty member to one of the schools I attended.

Congratulations Graduates!



Spring 2006 Master's Graduates
At the Departmental Ceremony

Masters Degree

Spring 2006

Haikun Bao
Erickson Davis
Shannon Gunter
Christof Keebaugh
Adam Key
Danny Modlin
Matthew Psioda
Andrew Rose
Deidre Woods

Bachelors Degree

Fall 2005

Kimberly Dover
Eugenia Griffin
Hiten Jethwa
Lindsay Katz
Wesley Kinney
Keith Knipping
Julia Mynett

Spring 2006

Jeffrey Benson
Ashley Blake
Tiffany Bracey
Aaron Collier
Sarah Collins
Joseph Curtis
Kelly Dillon
Timothy Ellis
Floyd Gabbert, Jr.
Joseph Griffin
Matthew Henrickson
Allison Jacobs
Dwight Lawing, III
Jason Smith
Christopher Tice
Douglas Wallace
Samantha Williams



Spring 2006 Bachelor's Graduates
At the Departmental Ceremony



Support the UNCW Mathematics

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

- * **Mathematics and Statistics Trust Fund**
(supports student awards, guest speakers and other needs)
- * **Toney Scholarship Fund**
- * **Crews Scholarship Fund**
- * **International Student Graduate Fund in Mathematics and Statistics**
- * **Thad Dankel Mathematics Scholarship Endowment**

Send to: UNCW Advancement Services
601 South College Road
Wilmington, NC 28403-5990

*Gifts to UNCW qualifies as a charitable donation.
Thank you for your consideration and generosity!*

Summations

*Department of Mathematics & Statistics
University of North Carolina at Wilmington*

Editor

Mrs. Terry S. Fleck

Associate Editor

Mrs. Kathy Beyma

Phone: (910)962-3290

Fax: (910)962-7107

Chair's E-mail Address: fengw@uncw.edu

Homepage: <http://www.uncw.edu/math/>
601 South College Road
Wilmington, NC 28403-5970

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: (____) _____ (____) _____ E-Mail Address: _____
Home Work

Employer: _____ Position: _____ Gift Matching Co.? ____Yes ____No

Street City State Zip Code + 4

Graduation Date: _____ Degree/Major: _____ Is spouse UNCW alumnus? ____Yes ____No
Semester/Year

Alumni News! Send your update by e-mail (fleckt@uncw.edu) or mail (Mrs. Terry Fleck, 601 S. College Road, Wilmington, NC 28403-5970)

We want to hear from you!

Please provide us with information about yourself. Where are you and what are you doing? Do you know of other alumni? If so, please include information about them as well.

