

Math Musings

*The Newsletter of
the Elon Math
Department
Volume 7
June 2003*

Bill Barbee Retires 33 years of service remembered

“Bill Barbee had a way of explaining concepts visually with pencils and a sheet of paper...and I understood just what he meant!” says Allyson Randolph Neeriemer '00. Former students reflect on Bill's 33 years at Elon with kind words and fond memories. Exclaims Phil Garner '73, “It was in my first semester of Calculus, sitting at Bill's feet, that everything fell together. Were it not for Bill's leadership I might have switched to another major.” Lori Tyler '92 says that Bill's enthusiasm for math and teaching have influenced her high school teaching over the years and now as a graduate student.

Bill Barbee is a native of Buncombe County in western North Carolina and grew up near Weaverville. He began dating his future wife Susan in high school, but they left in separate directions for college, Bill to Wofford and Susan to the University of North Carolina at Greensboro. After receiving his B.S. degree in mathematics and membership into Phi Beta Kappa, he continued his education at the University of Tennessee. He married Susan in 1962, and headed to Mercer University in Macon, Georgia in 1963 to work as an instructor in the math department. After receiving his master's in mathematics in 1964, he was promoted to assistant professor.. In 1970, Bill applied for an opening at Elon College so that he could be closer to home and family, and he has been at Elon ever since.

Bill remembers his early years at Elon when there were only four full-time members of the department and one adjunct. There were no computers, no computer science classes, no e-mail and no electronic calculators. The department expanded in 1974 with the arrival of Gerry Francis, who would become Provost, and Richard Haworth. That year Bill was awarded one of the first Daniels-Danieley Awards for excellence in teaching at Elon. He became Department Chair in 1976, serving in that capacity for two years. Bill saw the department expand again in the early 1980s when Bill and Vicki Hightower were hired as the first computer science professors. Soon after, Al Carpenter and Jim Murphy also joined the math department to teach computer science. Computing sciences continued to expand and became a separate department in the mid 1980s. Bill has worked for five department chairs in addition to his own tenure in that position: Wes Alexander, Gerry Francis, Richard Haworth, Rosalind Reichard, Jeff Clark, and now Skip Allis.

Bill has noticed many changes throughout the years. His office in the late 1970s and 1980s was located on the first floor of Duke, which was then a very crowded math-science building. The math department moved to the third floor of Whitley behind the auditorium, where offices were small and sometimes noisy with the performances being held in the auditorium. Returning to Duke in the late 1990s was a welcome change. In Duke, the math department occupied a separate floor with air-conditioned comfort and spacious offices.

Changes have come in other ways to the department. Bill remembers the days when slide rules and tables were the norm. Today, all students have a graphing calculator and the calculator manipulations are taught by use of an overhead projector. Computers are routinely used in the classroom, and PowerPoint presentations are becoming more routine. Bill says that there is more emphasis on student research today, since students not only do research for their senior seminar course, but they also present at national and regional conferences.

After retirement, Bill plans to travel, read, and get involved with outdoor activities. He wants to spend more time with his family, including his three children and six grandchildren, all of whom live in North Carolina. Richard Haworth best summarizes Bill's influence on the department. “Bill has been the calm, stable influence. His experience and personal perspectives produce valuable wisdom for all of us. When he speaks in a departmental meeting, we know that his views have been well thought out, and his recommendations are seldom debated.” Bill's life can be characterized by a motto attributed to the great mathematician, Frederick Gauss, “Few but ripe.” Bill, we will miss you.

MORE TRIBUTES TO BILL BARBEE

I owe my success to Mr. Barbee. He was the one who piqued my interest to continue my studies and earn my degree. He was very animated and demonstrative in his lessons. I am a visual learner and he fit perfectly to my learning style. I also appreciate the fact that he treated me as a person and not just "someone passing through."
....Allen Pritchard '83

His classes were some of my favorite at Elon....Allen Lloyd '87

Best wishes in your retirement and I still don't do homework....Gene Brooks '89

I was in Bill's calculus class his first year at Elon. Thanks a lot for reminding me just how old I am. I must hand it to Bill for solidifying my decision to major in mathematics....Phil Garner '73

Thanks to Bill for making the challenges of mathematics fun....Eric Hammond '87

I have fond memories of Professor Barbee "hounding me" for not memorizing the truth tables in Discrete Math and his amazing ability to get so excited about various topics in Linear Algebra...Lori Tyler '92

I still have the calculus book that I used in Bill's class 10 years ago and I have used it to tutor other high school students through the years. I remember his drawing the most perfect integral and bracket signs like he had been doing it forever. My brackets still look like a squiggle and with a bump....Meredith Webster '96

Bill Barbee was my favorite math professor....Marilyn Newton '74

I feel a deep connection with Bill. We were both born on July 17th. My mother's maiden name was Barbee, so we both come from a long line of Barbees. Basically if you put Bill in a Hawaiian shirt, you couldn't tell us apart.... Alan Russell, Assistant Professor in Mathematics.

I still remember Bill Barbee's excitement in teaching vectors. To this day I have never seen anyone so enthusiastic about them....Mary Mayo '88

Unannounced, about 10 years ago I stopped by Bill Barbee's door to say hello. Bill immediately recognized me and remembered not only my name but also remembered and asked about my wife, Elizabeth (an Elon graduate in English), and recalled who I had dated before I started dating my wife. He then pulled out the grade book from one of the first classes I had taken from him, went down the list of names of students in the class, and told me what everyone was now doing....Larry Hodge '74

I used to join Professor Barbee and Professor Al Carpenter for lunch at the old Student Center grill, where we would discuss sports, current events and the prices of salads. They had a running joke about calling the small salads the "Professor Salary Lunch." Professor Barbee was a joy to have as a professor and friend. His willingness to share his time with his students was something that makes a good professor a great professor.....Scott Oakes '90

No one can teach Linear Algebra like Mr. Barbee
.....Allyson Neeriemer '00

OTHER MEMORIES FROM OUR ALUMNI

My advisors, Mr. Wes Alexander and Mr. Bill Barbee, were simply two of the greatest individuals that I have ever come into contact with in my life.....Bryant Ford '74

Except for Algebra I and Algebra II, I was the only female in all of my math classes the whole four years....Rosamond Roane '52

Jason Sox was my main math teacher and my mentor. I have often thought about him and have wanted to thank him for having the faith in me to help me through the difficult courses....Bill Kerman '56

COMAP WINNERS AGAIN

Once again the Elon COMAP (The Consortium for Mathematics and its Applications) teams are stars in an international contest. The math department entered three teams this year against 638 teams from the United States such as Harvard, the United States Military Academy, the California Institute of Technology and Wake Forest University as well as countries such as China, Australia, Canada, Finland, Ireland, and Hong Kong. The award categories were: Outstanding (3%), Meritorious (14%), Honorable Mention (33%) and Successful Participant (50%). The event this year began on Thursday, February 6 at 8:00 pm. The teams worked throughout the weekend and had to submit a written paper the following Monday morning at 8:00 am.

Claiming a meritorious award was the team of Daisy Cunningham '03, Adam Benjamin '04, and T. J. Zellar '04. Their problem was to determine the correct number of explosive detection devices to use at each airport and how best to use the devices when operational.

The team composed of Ryan Huff '03, Ryan Barnard '05, and Phil Pigg '04 studied the problem of formulating the optimal treatment for a gamma knife unit which delivers radiation to brain tumors. They won honorable mention for their efforts. The third team composed of Bob Davis '03, Katie Iwancio '03, and Brian DeYoung '03 were awarded successful participant for their work on the explosion device problem. The Math Department congratulates the teams for their arduous efforts and for bringing international recognition to Elon's Math Department.

ORIGAMI CLASS IS A WINTER TERM FAVORITE

When Assistant Professor Alan Russell was seven years old, he discovered three pages of elementary origami in one of his mother's craft books, and he began to copy the design with whatever paper he could find. This activity has become a life-long hobby. When the math department needed an upper-level General Studies class that did not have prerequisites, Russell volunteered to share his origami talents in a winter term class. This class combined the ancient Japanese art form of paper folding with modern math lessons.

Central to the classrooms activities, the students were required to look at origami from the perspective of their major. For example, a business major looked at the marketing and sales of origami books and paper. A sports medicine major examined ways to use origami for exercises related to hand injuries or arthritis. The math aspect of the class was related to the creating of figures from a geometric as well as a statistical perspective. The class was writing intensive, involving daily journal keeping and a final ten-page paper.

To prepare for the class, Russell collected 40 books on the subject and attend the international origami festival in Charlotte last fall. Russell's interest has spread to other members of his family. His five-year-old daughter is quite adept at folding butterflies. Russell plans to teach this class in winter term again in 2004.

LOTS OF NEW BABIES AND OTHER FAMILY NEWS

- **Lisa and Jim Beuerle**, both professors in the math department, welcomed the arrival of their first child, Lauren Paige Beuerle, on August 23, 2002, weighing 7 pounds and 1 ounce.
- **Crista Coles** has announced the arrival of a new baby boy. Emil Suren Arangala was born on April 13 to Crista and husband Sanjay Arangala. He weighed 7 pounds and 6 ounces.
- Carey Gregory Metts V was born to **Dr. Andrea Metts** (adjunct professor) and her husband Carey on Sunday, February 2. He weighed 7 pounds and 13 ounces and was 19 1/2 inches long.
- **Richard Haworth** has a second grandchild. Caroline Mae Wyrick entered the world on April 3 weighing 8 pounds and 14 ounces. Proud parents are Cheryl and David Wyrick, who also have another daughter Katherine, age 2. Cheryl plans to finish her Ph.D. in educational research methodology at UNC-G next year. Richard's son Carlisle is working on his master's degree in applied geography at the University of North Carolina at Greensboro.
- **Bill and Vicki Hightower's** son Kenneth received his Ph.D. from the University of North Carolina in Chapel Hill in econometrics and is working for an investment firm in New York City. Their other son, Karl, and his wife live in Texas and are expecting their first child in August.
- **Bernice Foust's** daughter, Jessica, has been accepted into the Early College at Guilford College. Early College is a unique and rigorous academic experience for students with a distinguished record of high academic performance. Students in grades 9 and 10 take all their high school courses on the campus of Guilford College and, as juniors and seniors, the students take college courses. Students graduate at the end of their senior year with a high school diploma and two years of college credit from Guilford College. Jessica is an eighth grader at Eastern Guilford Middle School. Bernice is the secretary for the math, computing sciences and sociology departments.

Please send us news. If you respond, we will mention you in the next newsletter. We would love to hear from you even if you have replied in previous years (Mail to Helen Walton, CB 2277, Elon NC 27244 or email her at walton@elon.edu)

Name _____ Nickname _____

Year of graduation _____

Address _____

Phone: home _____ work _____

Occupation _____

Spouse's Name _____

Spouse's occupation _____

E-mail Address _____ Internet Home Page _____

A brief summary of your memorable moments since graduation:

Children and grandchildren: (include names, ages, and anything about them)

Hobbies and activities:

Favorite memories from Elon math classes:

TODD LEE RECEIVES TENURE PROMOTED TO ASSOCIATE PROFESSOR

At the spring meeting of the Board of Trustees, Dr. Todd Lee was promoted to the rank of Associate Professor and granted tenure. Todd is completing his eighth year at Elon. He received his bachelor's degree from Guilford College and his master's and doctorate from Texas Tech University. He has served as senior research coordinator for the math department as well as director of the Science Fellows program. He also served as a member of the Academic Council. He is currently working on a series of Discrete Math and Applied Calculus textbooks to be published in late summer by Addison Wesley Longman Inc. Look for him on Amazon.com early next year. Congratulations to Todd for his many achievements.

OTHER DEPARTMENT HAPPENINGS

- **Skip Allis**, Department Chair, presented a talk at the MAA regional meeting at Clemson University in March entitled *A Mixed Approach to Teaching Linear Algebra*.
- **Richard Haworth** is on the North Carolina Council of the Teachers of Mathematics (NCCTM) Board of Directors and is a member of the Executive Committee. He is also the Convention Services Manager with NCCTM. He continues to serve as the director of the area high school math contest and is a member of Elon's Promotion and Tenure Review Committee.
- **Lisa Beuerle** and **Janice Richardson Plumblee** presented a talk at the National Council of the Supervisors of Mathematics in San Antonio in April. Their presentation was entitled *Teacher Educators and Math Faculty Working Together to Build Deep Understanding of Elementary School Mathematics in a Pre-service Education Program*. **Janice** has served as the President of the NCCTM Central Region for the past two years. She is the director of the Teaching Fellows program at Elon.
- **Alan Russell** serves as chair of the Special Needs Advisory Committee. He is the first chair of this committee outside the Education Department. He also serves on the General Studies Council. He was the professional development speaker on the use of Geometer's Sketchpad and Fathom with the San Diego and Indianapolis school systems.
- **Jeff Clark** has been on the speaker's circuit this year. In November at the International Conference on Technology in Collegiate Mathematics in Orlando, he spoke on *Preparing Documents for Print, HTML, and PDF*. He made a presentation in January on *Examining Data Collection and Criteria Selection in Introductory Statistics* at the Joint Mathematics Meetings. Then in March, *Parsing Permutations* was the title of his talk at the Southeastern Region Mathematical Association of America Conference at Clemson University in March. Recently he was elected chair of the Academic Council, a position held by the most respected members of the Elon faculty. His paper, *Elementary Grobner Theory*, has been accepted by the Missouri Journal of Mathematical Sciences for publication at a later date.
- **Jeanne Williams**, retired professor of statistics, was honored recently at North Carolina State University when it celebrated "100 Years of Women at NCSU." Professor Williams was the first person to receive a master's degree in statistics at NCSU.
- At the ICTCM conference in November, **Todd Lee** gave a seminar with Paula Young from Salem College about the pedagogical use of Excel in Calculus projects. He was on sabbatical during the fall 2002 semester.
- **Jim Beuerle** serves as the faculty advisor to Kappa Mu Epsilon, the mathematics honorary at Elon. He gave a talk at the MAA/AMS meeting at Clemson University in March entitled *On the Capability of a Metacyclic Group*. He was elected to FANS (Faculty Assisting New Students).
- **Crista Coles**, the A. L. Hook Emerging Professor in Science and Mathematics, gave a talk entitled, *Numerical Animation using Mathematica*, at the International Conference on Technology in Collegiate Mathematics in Orlando last November.
- **Helen Walton** has submitted an application for a Pi Mu Epsilon chapter at Elon. Pi Mu Epsilon, the most prestigious mathematics honor society, is associated with large universities such as Duke, UNC-CH, and Wake Forest. We hope to report a new chapter in the next newsletter!

STUDENT HAPPENINGS

Jennette Olli '03 and **Cheryl Borden '05** presented in February at the Nebraska Conference for Undergraduate Women. Jennette spoke on "Generalizing Pascal's Triangle and Multinomial Coefficients." Cheryl talked about her summer's research, "Predicting Yield Rates of Prospective Students at Elon."

Eight students gave talks at the AMS/MAA Sectional Meeting on March 21-22, 2003 at Clemson University. **Shaun Lynott '03** took first place in the undergraduate presentation awards. The subject of the talks are as follows:

- **Daisy Cunningham '03** – Vertex Magic
- **Robert Davis '03** – Homothetic Triangles with Coincident Euler and Nagel Lines
- **Kathleen Iwancio '03** – Factoring Large Permutation Groups
- **Shaun Lynott '03** – Flipping Geometry
- **Chaska Mendoza '03** – Upside-Down Numbers...Upside-Down
- **Jessica Munley '03** – Generalizations and Analogues of the Pythagorean Theorem
- **Brian J. Parker '03** – An Investigation of Excevians and Extriangles.

Five students presented their research at Elon University's Student Undergraduate Research Forum in April, including **Robert Davis '03**, **Daisy Cunningham '03**, **Katie Iwancio '03**, **Jeanette Olli '03**, and **Chaska Mendosa '03**. They gave the same talks listed above at the MAA Conference. **Cheryl Borden '05** spoke about her summer research in a talk entitled "Calculating the Elon Factor for Success."

Aja Johnson '05 is doing research on modeling the spin-off on The Price Is Right under Crista Coles and Todd Lee. Aja has recently been named the new GlaxoSmithKline Women in Science Scholar for next year.

Jessica Winterwerp '05 has been accepted into the civil engineering program at the University of North Carolina at Charlotte. She is the first math student from Elon to complete the new dual math/engineering program where students receive a bachelor's degree from Elon and a bachelor's in engineering degree from another university.

Shaun Lynott '03 is working as a benefits analyst for AON Consulting in Winston-Salem.

The senior math majors scored impressively on the ETS exam this year. All are required to take this exam which tests proficiency in the major. One of our students received a perfect score of 200 and another made 189. Both of these scores are records for Elon's math department. Ten of the twelve scored above the national average with six in the top quartile and 3 in the top decile!

The following senior math majors have been accepted into graduate school:

- **Robert Davis** – Wake Forest University
- **Daisy Cunningham** – Tulane University
- **Katie Iwancio** – North Carolina State University
- **Jeanette Olli** – University of North Carolina at Chapel Hill
- **Jessica Munley** – Wake Forest University
- **Richard Dutton** – William and Mary University in computer science
- **Chaska Mendoza** – George Washington University

Jennette Olli '03 received the NCCTM Central Region's outstanding math education student award in October 2002. She is the eighth Elon student to win this award since its inception in 1986.

Jessica Munley '03 presented a talk at the NCCTM Central Region information session held at Elon University in March 2003 on "Using Smartboard in the Mathematics Classroom."

On May 1, more than 75 campus leaders were honored at the annual Omicron Delta Kappa awards ceremony. Math majors receiving awards were: **Josh Rowan '04** – W. L. Monroe Christian Education and Personality Award, **Bob Davis '03** – Mathematics Service Award, **Kathleen Iwancio '03** – Mathematics Research Award, and **Jennette Olli '03** – Mathematics Academic Achievement Award.

Karen Lawrence '04 has an internship with Jefferson Pilot Life Insurance Company as an actuary.

Brian Parker '03 will teach math at Eastern Alamance High School next year, and **Jenny Hornback '03** will teach at Graham High School.

NEWS FROM THE ALUMNI

Lori Tyler '92 is working on her doctorate degree in mathematics education at Vanderbilt University.

Rosamond Roane '52 is a retired high school and middle school math teacher, living in Florida. She has three children and two grandchildren.

Bryant Ford '74 lives in Albemarle, North Carolina where he is chair of the math department at West Montgomery High School. He received his master's degree in mathematics education in 1986. In 2001 he passed the National Board Certification in Adolescent and Young Adulthood Mathematics.

Sharon Blatt '02 had a paper published in the Rose-Hulman Institute of Technology's *Undergraduate Research Journal* in the fall 2002 issue. The paper, based on her senior research at Elon, is entitled "RISKy Business: An In-Depth look at the Game RISK," and can be read online at <http://www.rose-hulman.edu/mathjournal/>.

Peter Lindstrom '94 of Dublin, California received the Young Alumnus of the Year Award at Elon in November 2002. He is pursuing groundbreaking research in computer science with the Center for Applied Scientific Computing at Lawrence Livermore National Laboratory. Previously, as a research assistant at Georgia Tech, he was the main architect of a visual simulation system that has been used in some of the largest military field exercises in recent history. He earned his doctorate degree in computer science from Georgia Tech in 2000.

Meredith Webster '96 works in Human Resources at United Technologies in Connecticut. She has received an MBA degree.

Jon White '72 is employed at Carolina Software Technologies.

Phil Garner '73 has worked in Materials Management for Sara Lee Corporation for the last 17 years.

Allen Lloyd '87 is with Wachovia Securities in Charlotte.

Ash Noronha '01 lives in Burlington and works as an account executive with a reinsurance brokerage. He was married in 2002 and has purchased a house in Burlington. His wife Mechelle works as a teacher at Turrentine Middle School.

Leanna Briles '02 will teach at Turrentine Middle School in Burlington this fall. She is getting married this summer.

Stephanie Closs '00 teaches Algebra II and Geometry at Atlee High School in Hanover County, Virginia.

Allyson Randolph Neeriemer '00 is a sixth grade math teacher at North Ridge School in Weaverville, North Carolina.

Mary Mayo '88 is currently teaching AP Calculus via satellite to students all over the country with the majority of them in the state of Virginia. This program is administered by the Henrico Distance Learning Network. It gives students the chance to take AP classes and foreign language classes that their schools are unable to provide.

Julie Pelter '02 is teaching mathematics in Charlotte, North Carolina.

Holly Weeks McDow '99 received one of two of the Guilford County Schools' Rookie Teacher of the Year Awards. She teaches algebra, geometry and calculus at Western Guilford High School and received her master's degree from UNC-CH.

Kristin Miller '98 and Todd Bunnell were married in August 2002. Kristen is a mathematics instructor at Clemson University.

Jane Cooper Colsen '80 is home schooling her three children, Daniel 10, Michael 7, and Karen 5.

Marilyn Newton '74 is getting married on June 28, 2003 to Rick Yates. They will live in Deland, Florida. Marilyn has been working in accounting for Wycliffe Bible Translators for the past 17 years.

Lyndsey Jessup Haywood '99 and Darin Haywood '97 announce the birth of a son Jacob Michael Haywood on March 12, 2003. Lyndsey teaches and coaches at East Surry High School.

Erin Krupa '02 is attending graduate school at Wake Forest University. She has been inducted into the graduate student honor society, the only first year student elected to the society in the last five years.

Justin Luckett '02 works as a benefit analyst for AON Consulting in Winston-Salem.

Kristina (KeeKee) Roberts '97 is a technical support specialist for an engineering and management firm in Alexandria, Virginia. She edits and produces proposals for renovation and construction projects for private companies and military installations. She has a three year old daughter..

Joy Blackwell '02 will marry Thomas Hapson in June. The wedding will take place in Roxboro, North Carolina.

Brian Neiberline '00 married Cheryl Braccini '99 in August, 2002. They live in Mahwah, New Jersey. Brian is a sales manager for an Acura dealership.