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The Newsletter is published in April and November each year. The deadlines for items to be included in each issue are March 15 and October 15 respectively. Departmental News appears in the November newsletter only and is solicited from department liaisons. Full page ads are available for graduate programs and for corporate ads. Quarter page ads are available for position advertisements. Contact the advertising manager for details.

Material may be submitted to the editor on paper, by email, or on 3.5" diskette, electronic forms are preferred. Currently the newsletter is produced using Microsoft Publisher, which can import plain text files or files produced by most word-processing software.

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**Advertising Manager:** Same as editor.

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## Section Calendar

January 15-18, 2003	MAA/AMS Annual Meeting, Baltimore, MD
February 7-8, 2003	Georgia Perimeter College Regional Mathematics Conference, Atlanta, GA
February 15, 2003	Georgia State Dinner, Kennesaw State University, Kennesaw, GA
February 21, 2003	South Carolina State Banquet, Francis Marion University, Florence, SC
<b>March 21-22, 2003</b>	<b>Joint Southeastern Section MAA/SE Atlantic Section SIAM Meeting, Clemson, SC</b>
April 9-12, 2003	NCTM Annual Meeting, San Antonio, TX
July 31-Aug. 2, 2003	MathFest, Boulder, CO
November 13-16, 2003	AMATYC Annual Meeting, Salt Lake City, UT
January 7-10, 2004	MAA/AMS Annual Meeting, Phoenix, AZ
<b>March 12-13, 2004</b>	<b>Southeastern Section MAA, Clarksville, TN</b>
April 21-24, 2004	NCTM Annual Meeting, Philadelphia, PA
August 12-14, 2004	MathFest, Providence, RI
November 18-21, 2004	AMATYC Annual Meeting, Orlando, FL
January 5-8, 2005	MAA/AMS Annual Meeting, Atlanta, GA
April 6-9, 2005	NCTM Annual Meeting, Anaheim, CA
August 4-6, 2005	MathFest: Albuquerque, NM
November 10-13, 2005	AMATYC Annual Meeting, San Diego, CA
January 12-15, 2006	MAA/AMS Annual Meeting, San Antonio, TX
April 26-29, 2006	NCTM Annual Meeting, Kansas City, MO
March 21-24, 2007	NCTM Annual Meeting, Atlanta, GA



## From the Chair

Fall, a great time for new beginnings in our colleges and universities! I hope you have been enjoying this season with your students, colleagues, and families. Through this newsletter, I always enjoy catching up with your accomplishments and seeing the quality things ahead for us in the section.

Again this fall we are happy to include a pullout portion to help you in attending the Spring Meeting at Clemson University on March 21-22, 2003. We are planning on over 400 attending this joint meeting with the SIAM SE Atlantic Section. I would call attention to several features of this meeting, including

- An increased variety of short courses on Friday morning;
- Two Jeopardy Contests, one for Undergraduate Teams, another for Celebrity Teams; and
- One-hour publisher presentations on newest products for classroom use.

I've had a lot of fun working with section officers of both MAA and SIAM on this spring meeting at Clemson. The upstate of South Carolina is a beautiful part of our region. I look forward to seeing you there.

Thank you for the opportunity to be your section chair these two years. I've had great examples to follow, and look forward to reading Stephen Davis' column in this spot next spring.

### Ray E. Collings

## Project NExT-SE

Project NExT (New Experiences in Teaching) is a national program for new or recent Ph.D.'s in the mathematical sciences interested in improving the teaching and learning of undergraduate mathematics. Project NExT-SE is the Southeastern Section's version of the program.

The current class of NExT-SE fellows will hold its sessions on March 20-21, 2003, just prior to the beginning of the Sectional meeting at Clemson. The next new class of Project NExT-SE fellows will begin in the spring of 2004. For information, contact John Harris ([john.harris@furman.edu](mailto:john.harris@furman.edu)) or Greg Rhoads ([rhoadsgs@appstate.edu](mailto:rhoadsgs@appstate.edu)).

Greg Rhoads

[gsr@math.appstate.edu](mailto:gsr@math.appstate.edu)

John Harris

[john.harris@furman.edu](mailto:john.harris@furman.edu)

## LOOKING FOR A GREAT MATHEMATICS SPEAKER?

### Invite a Southeastern Section Lecturer to your campus!

Many think the Section Lecturer only delivers an address at the Annual Meeting of the Section, but this person also visits individual institutions within the Section.

**John Baxley** of Wake Forest University is the 2002-2003 Section Lecturer. He is available for the next two academic years. Contact him at [baxley@mthcsc.wfu.edu](mailto:baxley@mthcsc.wfu.edu). Possible talks include:

- Infinite Series and How They Grow (E\* or I)
- What's the Value of the Mean Value Theorem? (I)
- Variations on Weierstrass' Approximation Theorem (I)
- Boundary Value Problems for Ordinary Differential Equations (I or A)
- Homicide Detectives and Differential Equations (I or A)
- A Simple Model for the Spread of Sexually Transmitted Diseases (A)

**Robert Bryant** of Duke University was the 2001-2002 Section Lecturer. He is still available for the 2002-2003 academic year. Contact him at [bryant@math.duke.edu](mailto:bryant@math.duke.edu).

**\*E is for Elementary:** intended for college students who are interested in mathematics, and for educated laymen in the general public. No college level training in mathematics is assumed.

**I is for Intermediate:** intended for students who have completed a year of calculus or other mathematics at a similar level.

**A is for Advanced:** intended for junior and senior mathematics majors.

**Make your arrangements today!**



## From the Governor

This past summer's MathFest in Burlington, Vermont was a huge success. Not only were there many interesting speakers but also, with a registration of 1270, the attendance at this meeting far surpassed that of any previous MathFest. I've mentioned before that I really enjoy this smaller, more informal format. If you haven't attended a MathFest before, please plan on attending MathFest in Boulder July 31- August 2, 2003.

And while you are making plans for next summer, how about considering a trip to Greece with the MAA? The MAA is sponsoring its first mathematical tour scheduled for May 22-June 5. Victor Katz, Visiting Mathematician at the MAA, will be the tour director. The tour is limited to 32 individuals so make your reservations early. Look for details in FOCUS.

The PREP workshops sponsored by the MAA continue to be very popular. All but one of the workshops offered this past summer were fully subscribed. Plans are already underway for next summer's workshops and details should be available soon.

MAA Treasurer John Kenelly joined the MAA as Visiting Mathematician for 2002. John worked on raising money for renovations to the Carriage House and building an endowment. He has observed that the endowment level of the association is short of accepted standards for base funds for our type of organization. John would be happy to talk to anyone who is interested about the tax advantages of contributions to an endowment.

In January, David Stone completes six years of service as Chair of the Committee on Sections. But don't think that David will be sitting around more. He is currently serving as Chair of the Nominating Committee for MAA - and looking for your nominations - and in January begins a term as Chair of the Committee on Liaisons. Plus we plan to keep him busy here in our Section. Thanks, David, for your hard work on behalf of the MAA.

**Theresa Early**

## **Etta Zuber Falconer, 1933-2002**

### **In Memoriam**



The Southeastern Section of the Mathematical Association of America is saddened by the death of Etta Zuber Falconer, Professor Emerita of Mathematics at Spelman College, on September 19, 2002 of complications from pancreatic cancer. Our lives were enriched by this exceptional leader in mathematics and mathematics education.

Born in Tupelo, Mississippi in 1933, Falconer received her A.B. in mathematics from Fisk University in 1953 and her M.S. at the University of Wisconsin in 1954. After receiving her master's degree, she taught as an instructor at Okolona College from 1954 to 1963 and then taught one year in the Chattanooga school system. In 1965 she accepted a position as an Assistant Professor at Spelman College in Atlanta, Georgia. While at Spelman, Falconer earned her Ph.D. at Emory University under the direction of Trevor Evans, who insisted that "she was the best of the numerous Ph.D. students he had in his 30 years at Emory" [AWM Newsletter, Vol. 25, No. 2, March-April 1995, 3-4.]. When she received her Ph.D. in 1969 she was the 11th African American woman to do so. She left Spelman in 1971 for Norfolk State University, but returned in 1972 as Associate Professor of Mathematics and Chairperson of the Mathematics Department, a position she held from 1972-1982. In her 37 years at Spelman she held many titles including Chair of the Division of Natural Sciences (1982-90), Fuller E. Callaway Professor of Mathematics, Associate Provost for Science Programs and Policy, Interim Provost, and Senior Advisor to the President. These positions enabled her to positively impact the lives of hundreds of young women in mathematics and the sciences as well as scores of faculty.

Professor Falconer instituted programs to help undergraduates prepare for suc-

cess in graduate school. These programs included the NASA Women in Science Program started in 1987, NASA Undergraduate Science Research Program, and the College Honors Program at Spelman College. Dr. Sylvia Bozeman was recently quoted in the Atlanta Journal Constitution.: “When she [Falconer] hired me in 1974, only about 10 percent of the women at Spelman majored in science. Today a third of our students major in science, mathematics or engineering.”

Her many professional activities included working in several capacities with the American Association for the Advancement in Science (AAAS), the American Mathematical Society (AMS), Association for Women in Mathematics (AWM), the Mathematical Association of American (MAA), the National Association of Mathematicians (NAM) (she was a founder of NAM), the National Institute of Science (NIS), National Science Foundation (NSF), and the Joint Committee on Women - AMS-MAA-NCTM-SIAM.

For her many contributions, she received numerous honors, awards and recognitions. These include a NSF Faculty Fellow (1967-69), the UNCF Distinguished Faculty Award (1986-87), Spelman' s Presidential Award for Excellence in Teaching (1988), Spelman' s Presidential Faculty Award for Distinguished Service (1994), NAM' s Distinguished Service Award (1994), AWM' s Louis Hay Award for contributions to Mathematics Education (1995), QEM' s Giants in Science Award (1995), the Honorary Degree: Doctorate of Science, University of Wisconsin-Madison (1996), a Fellow of the AAAS (1999) and the AAAS Lifetime Mentor Award (2001).

Professor Falconer's legacy is best summed up in her own, oft quoted words upon receiving the AWM Louise Hay Award given to celebrate outstanding achievements in mathematics education.

I have devoted my entire life to increasing the number of highly qualified African Americans in mathematics and mathematics related careers. High expectations, the building of self confidence, and the creation of a nurturing environment have been essential components for the success of these students. They have fully justified my beliefs. Perhaps the most rewarding moments have come when younger faculty have undertaken the same goal and have surpassed my efforts - reaching out to the broader community to help minorities and women achieve in mathematics.



## Fall Executive Committee Meeting

The fall meeting of the Southeastern Section Executive Committee was held Friday and Saturday, September 20-21, 2002 on the campus of Georgia Perimeter College in Atlanta, GA. Ray Collings opened the meeting by welcoming the new members of the Committee, Gary Hall, the State Director of Tennessee and John Baxley, the Section Lecturer. The Committee then heard reports from each of the officers.

David Stone, who just completed two terms as Chair of the Committee on Sections at the national level, discussed how other MAA sections have had joint meetings with other organizations. Patty Monroe discussed how she is publicizing the Spring Meeting with faculty at two-year schools and how we are going to have some features at the meeting such as developmental textbooks and software that will be of interest to this group. The Secretary-Treasurer presented a financial report. Section Governor, Theresa Early, discussed the Mathfest in Burlington, VT, where there was a record attendance with approximately 1270 participants. She also discussed searches for the position of editor of several MAA journals and spoke of nominations for national offices and committees. Newsletter Editor Virginia Watson discussed several aspects of the newsletter including advertising and a special report on lectures at institutions in the Section. Each State Director gave a report, which led to a discussion about the various versions of the State Dinners held around the Section as well as ways to locate all of the departmental liaisons in the Section. We then heard a report from the Nominating Committee, the Site Selection Committee, the Teaching Award Committee, and the Service Award Committee. The Committee also heard a report from Joe Albree, the Section Historian and discussed whether or not the Section Webmaster should be made a permanent voting member of the Executive Committee.

On Saturday, the Committee was joined by Chris Cox and Mark Cawood, the organizers of the Spring MAA-SE joint meeting with the Southeastern Atlantic Section of the Society of Industrial and Applied Mathematics (SIAM-SEAS). They led us through a discussion of the Spring Meeting to be held March 21-22, 2003, at Clemson University. Because this is a joint meeting, there will be four plenary speakers, six short courses, and a Math Jeopardy game for students. The meeting will still contain all aspects of the typical MAA-SE Section Meeting including TA Rush, the Awards Ceremony and a Friday Evening Social. Registration costs will be comparable to last year's Spring Meeting held with AMS. The Meeting concluded with a discussion of possible future meetings with other professional organizations and when another joint meeting would be feasible. **Martha Abell**



## Announcements

### Contribute to MAA-SE Student Activities

The Southeastern Section supports student activities at its annual meeting through:

- TA Rush and a student pizza lunch
- Undergraduate Student Poster Sessions
- Undergraduate Student Contributed Paper Sessions
- Reduced student registration fees

Further, student participation in the Association is encouraged by the State Directors through their organization of state dinners and coordination with MAA Student Chapters.

The Executive Committee of the Southeastern Section invites you to help sponsor these activities through a donation of \$10 or more. Make your contribution by sending a check (payable to MAA-SE) to

Martha Abell, Secretary-Treasurer  
MAA Southeastern Section  
Georgia Southern University  
P O Box 8130  
Statesboro, GA 30460

### Alabama State Dinner

The 8th Annual MAA Alabama State Dinner Meeting will be held on the evening of Friday February 14, 2003 at the University of Alabama at Huntsville. The speaker will be Joseph Neggers of the University of Alabama at Tuscaloosa. The annual conference of the Alabama Association of College Teachers of Mathematics will be held at UAH the following day. More information about these events will be posted at <http://mcis.jsu.edu/faculty/jdodd/MAAdinner/> when it becomes available.

### Georgia State Dinner

Kennesaw State University will host the Georgia State Dinner on Saturday, February 15, 2003.

### South Carolina State Banquet

The South Carolina state banquet will be held on Friday February 21, 2003 at Francis Marion University. Prof. Robert Bryant will be the speaker. The title of his presentation will be "Geometry Old and New: From Euclid to String Theory". The social will start at 5:30 PM. Everyone is invited to attend. For further info, please contact Subhash Saxena (saxenas@coastal.edu) or Dr. Tom Fitzkee (tfitzkee@fmarion.edu).

## **Call For Nominations for the 2003 Southeastern Section Distinguished Service Award**

The Southeastern Section presents a Section Distinguished Service Award at the annual spring meeting each year. A member of the Section who has made outstanding contributions at the Section level will be so honored at the March 2003 meeting in Clemson.

The Section Distinguished Service Award Committee encourages every member of the Section to submit a nomination to the committee chair for the 2003 award. Please send your nomination including a statement supporting the nomination to Hugh Haynsworth, via surface or email. [W. Hugh Haynsworth, Dean of Graduate Studies, The Graduate School - College of Charleston, 66 George Street, Charleston, SC 29424 or email: haynsworthh@cofc.edu]

Nominations for the 2002 award may be carried forward for consideration for the 2003 award, if the nominator so desires. If so, a letter which updates the previous nomination is requested from the nominator.

**DEADLINE FOR SUBMISSION: January 31, 2003**

### **Previous Service Award Recipients**

The Section Distinguished Service Award has been awarded in even-numbered years, beginning in 1990, then annually, since 1997.

April 1990	Trevor Evans, Emory University
April 1992	Bill F. Bryant, Vanderbilt University
April 1994	James G. Ware, University of Tenn. at Chattanooga
April 1996	Marcellus Waddill, Wake Forest University
March 1997	John Kenelly, Clemson University
March 1998	David Stone, Georgia Southern University
March 1999	M. F. Neff, Emory University
March 2000	Tina Straley, MAA Executive Director
March 2001	Charles Cleaver, The Citadel
March 2002	Sharon Cutler Ross, Georgia Perimeter College

## Call for Nominations 2004 Southeastern Section Certificate of Meritorious Service

The Board of Governors of the MAA instituted the Certificate of Meritorious Service at its meeting in January, 1984. The certificate is awarded once every five years in each section to a member of the section who has made significant contributions to the Association at the national and/or the section level. The nomination for this certificate is proposed by the section and approved by the Board of Governors and is awarded at a national meeting of the Association. This certificate has been awarded every five years since 1984 to a Southeastern Section Member.

### Previous recipients are:

August 1984	John Neff, Georgia Institute of Technology
January 1990	Ivey Gentry, Wake Forest University
January 1994	Billy Bryant, Vanderbilt University
January 1999	Marcellus Waddill, Wake Forest University

At this time the Section Award Committee solicits nominations for the 2004 Certificate of Meritorious Service. Please send your nomination including a statement supporting the nomination to Hugh Haynsworth, via surface or email. [W. Hugh Haynsworth, Dean of Graduate Studies, The Graduate School - College of Charleston, 66 George Street, Charleston, SC 29424 or email: [haynsworthh@cofc.edu](mailto:haynsworthh@cofc.edu)]

### DEADLINE FOR SUBMISSION: January 31, 2003

All previous recipients of the Section Distinguished Service Award are automatically considered for the Certificate of Meritorious Service.\*

### Automatic nominees for the Certificate of Meritorious Service are:

April 1994	James G. Ware, University of Tenn. at Chattanooga
March 1997	John Kenelly, Clemson University
March 1998	David Stone, Georgia Southern University
March 1999	M. F. Neff, Emory University
March 2001	Charles Cleaver, The Citadel
March 2002	Sharon Cutler Ross, Georgia Perimeter College

\*Although Tina Straley has received the section service award, she is not eligible for this award because she is no longer a member of the section.

# CLEMSON

U N I V E R S I T Y

## Department of Mathematical Sciences

**The Graduate Program** The Department offers the M.S. and Ph.D. degrees in mathematical sciences. The *master's degree* is based on developing breadth as well as depth in the mathematical sciences; it requires two years of course work and culminates with a master's project, directed by an individual faculty member. The *Ph.D. degree* generally requires at least three years of study beyond the master's degree. The Department also offers, together with the Department of Management, a Ph.D. in *management science*.

**Research Areas** Algebra and Discrete Mathematics, Applied Analysis, Computational Mathematics, Operations Research, and Probability and Statistics.

**Admission Requirements** Admission decisions are based upon GRE General scores, transcripts, and letters of recommendation.

**Financial Support** A number of graduate teaching assistantships are available, and they carry a stipend of \$14,000 for 10.5 months. Research assistantships are also offered, with stipends in the range \$14,000–\$20,000. Substantial tuition reduction is available to both graduate teaching and graduate research assistants. Highly qualified applicants may qualify for university fellowships, which carry an additional stipend and no additional duties.

**Additional Information** Visit our graduate web page using the address <http://www.math.clemson.edu/graduate/> or contact us by email at [mathsci@clemson.edu](mailto:mathsci@clemson.edu). You can also write to us: Graduate Coordinator, Department of Mathematical Sciences, O-102 Martin Hall, Clemson University, Box 340975, Clemson, SC 29634-0975.

## News From the Campuses

### **Agnes Scott College** (Decatur, GA)

The Mathematics Department welcomes David Robinson back to Agnes Scott College as a visiting Assistant Professor. Myrtle Lewin is teaching our sophomore level topics course this fall on "A Cultural History of Mathematics." This past May, Bob Leslie took a group of Agnes Scott students to Cuba as part of a Global Connections course that combined the areas of statistics and women studies to investigate "a statistical view of the status of women in contemporary Cuba." In July he gave a talk at the Sixth International Conference on the Teaching of Statistics in Capetown, South Africa, on this type of a travel lab component in an elementary statistics course. Alan Koch received a grant from Agnes Scott College as part of its Research Scholars Program to work with two senior mathematics majors on a project studying Fibonacci sequences in symmetric groups. Larry Riddle is continuing his work with the Educational Testing Service as the Chief Reader for the AP Calculus examinations. This past June he coordinated the grading of approximately 200,000 AP exams by 650 high school and college mathematics teachers at Colorado State University. Anyone interested in being a Reader for the AP Calculus program is encouraged to contact him at LRiddle@agnesscott.edu. (Submitted by Larry Riddle)

### **Albany State University** (Albany, GA)

The Department of Mathematics and Computer Science has a new Interim Chairperson, Dr. Zephyrinus Okonkwo. Dr. Okonkwo has been in the Department for three years, and began his duties as Interim Chair in August, 2002. The Department also has two new faculty members: Dr. Wanjun Hu in Mathematics and Computer Science, and Mr. Ambitabh Singh in Computer Science.

Dr. Marzine Green, Professor of Mathematics, and Mr. Jimmy L. Ramsey, Asst. Professor of Computer Science, successfully completed the Post-tenure review process in February, 2002. Dr. Ghunaym M. Ghunaym has been working with Deerfield-Windsor School helping to prepare National-Merit mathematically talented students for university admission. One of his students has already been admitted to Harvard University. Dr. Marzine Green and Mrs. Connie M. Leggett, in collaboration with Florida A. & M. University, have received a Phase III five-year NSF grant to help increase the number of minorities receiving Ph.D.'s in Science, Engineering and Mathematics. The Department of Mathematics and Computer science, under interim Chairperson Mrs. Connie Leggett, co-hosted the HBCU-UP conference. (Submitted by Marzine Green)

### **Armstrong Atlantic State University** (Savannah, GA)

We have four new faculty members in the math department: Paul Hadavas, Ebonee Jarrett-Brown, Dana Lane and Manuel (Bud) Sanders joined

**DEPARTMENT OF MATHEMATICS****UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL**

The Department of Mathematics has 33 faculty members and 55 graduate students. The department provides close student-faculty interaction in a broad range of areas leading to master's and doctoral degrees. A distinguished faculty is active in research, both pure and applied, including the fields of algebra, classical and functional analysis, algebraic and differential geometry, ergodic theory and dynamical systems, combinatorics, algebraic topology, partial differential equations, representation theory, mathematical physics, and mathematical biology..

Recently the department has developed a strong group in applied mathematics, which currently has ten tenure track faculty. The primary focus of the applied mathematics program is applied sciences; applications currently represented include polymers and materials sciences, oceanic and atmospheric dynamics, and fluid dynamics. Close ties have been established with applied sciences departments, both at UNC and at neighboring universities.

UNC is located in Chapel Hill, which is one vertex of the Research Triangle. Academic and cultural opportunities are enhanced by the proximity to Duke, North Carolina State, and the Research Triangle Park.

For additional information and on-line application forms, see our world wide web site at <http://www.math.unc.edu>. The Graduate School prefers the use of the on-line application form, however, if you must have a printed application or for additional information, contact:

Director of Graduate Studies  
Department of Mathematics, CB #3250  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27599-3250  
(email: [dgs@math.unc.edu](mailto:dgs@math.unc.edu))

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us this fall. Dr. Hadavas is a recent Ph.D. from Clemson in operations research. Ms. Jarrett-Brown holds a masters degree from Texas Tech. Ms. Lane' s masters degree is from Armstrong/Georgia Southern. Dr. Sanders' Ph.D. is from the University of Tennessee. His research area is topology. Dr. Sabrina Hessinger was recognized this year with the H. Dean Propst Award to faculty for service to students. On February 15, 2003 Armstong will host its twenty fifth annual high school mathematics contest. (Submitted by Tim McMillan)

#### **Athens State University (Athens, AL)**

This has been an exciting and busy year for the ASU Mathematics Department. A grant proposal submitted to the NSF by Dr. M. Leigh Lunsford will be funded via the DUE CCLI Program. The project, "Collaborative Research: Adaptation and Implementation of Activity and Web-Based Materials into Post-Calculus Introductory Probability and Statistics Courses," seeks to improve students' learning of postcalculus probability and statistics via the use of active and cooperative learning, visualization of concepts, and the use of simulations. The grant is a collaborative effort with Dr. Ginger Holmes Rowell (Middle Tennessee State University) and Dr. Tracy Goodson-Espy (University of Alabama in Huntsville). For more information about this project please see: [http://www.athens.edu/NSF\\_Prob\\_Stat/](http://www.athens.edu/NSF_Prob_Stat/).

Dr. Lunsford served as an organizing committee member for the Huntsville Simulation Conference (held on October 9 and 10). At the conference she chaired the Simulation in Education session. Ms. Dottie Fuller is once again President of the North Alabama Council of Teachers of Mathematics and is also serving on the executive board of the ACTM. She attended an NCTM leadership conference in Memphis in June and in September where she presented "NCTM Standards 2000: An Overview" to NACTM members. Ms. Fuller will also be the registration chairperson for the ACTM Fall Conference to be held at Auburn University-Montgomery on November 14-15, 2002. Dr. Neal Fentreess and Dr. Tina Sloan (ASU Education Dept.) will make the presentation "Walking Through the Grades and Beyond in Shaq' s Shoes" at an NACTM meeting to be held on AUM' s campus on November 15, 2002. Lastly, Ms. Fuller is serving as one of three AMSTI (Alabama Math, Science, and Technology Initiative) Advanced Math trainers for the State Department of Education. The AMSTI program, which is in its pilot year in North Alabama schools, supports a standards-based, project-based approach to teaching mathematics and science through modeling and application and with the support of technology. More information about ACTM, the Fall Conference, and NACTM can be found on the ACTM web site: <http://www.dpo.uab.edu/~tsmith/ACTM.htm>.

We are pleased to announce that Ms. Holly Camp (a mathematics and computer science double major) was selected for the USA Today' s 2002 All USA First College Academic Team. This is quite an honor since only twenty students nationwide were chosen for the team. We are also pleased that Ms. KaLyn Benson (ASU ' 02) was accepted into the mathematics graduate



The Department of Mathematics at the University of North Carolina at Charlotte offers programs leading to the Ph.D. degree in Applied Mathematics, the M.S. degree in Mathematics with concentrations in General Mathematics, Applied Mathematics, and Applied Statistics, and the M.A. degree in Mathematics Education. Areas of study in the Ph.D. program include, but are not limited to, *Algebra, Analysis, Computational Fluid Dynamics and Electromagnetics, Dynamical Systems, Numerical Methods, Partial Differential Equations and Mathematical Physics, Probability, Statistics, Stochastic Processes, and Topology*. In support of these programs, the Department has a strong research faculty of international stature.

For 2002-2003, assistantship stipends are set at \$10,200 for Master' s students and start at \$12,500 for Ph.D. students. Additional fellowship support is available for especially gifted students. Applications are accepted and considered as long as positions remain unfilled, but an application before January 15 is encouraged.

The University has an enrollment of over 18,000 and continued steady growth is expected. The metropolitan area of Charlotte is rapidly growing in terms of economic opportunity and cultural attractions that reflect a large and ethnically diverse multinational community of over 1.2 million people. For further information and applications, contact Joel Avrin, Graduate Coordinator, Department of Mathematics, University of North Carolina at Charlotte, Charlotte, North Carolina 28223, (704) 687-4929; [jdavrin@email.uncc.edu](mailto:jdavrin@email.uncc.edu). URL: [www.math.uncc.edu](http://www.math.uncc.edu).



program at the University of Alabama in Huntsville and is currently a Teaching Assistant. Lastly, Ms. Sabrina Balch had a great time this summer participating in a weeklong Mathematics Institute on minimal surfaces at Brigham Young University. (Submitted by Leigh Lunsford)

### **Auburn University** (Auburn, AL)

The most dramatic event in the Department occurred in March, when Ulrich Albrecht stepped down from his position as Department Chair and returned to full time teaching and research. In what must have been record time, the Department got organized, took nominations for a replacement, held elections, and selected Michel Smith to be our new Chair. The Dean forwarded the faculty's recommendation to the Provost and the appointment became official in April. It was a natural transition because Michel had been Assistant Chair. Greg Harris has been named as the new Assistant Chair and will be responsible for course scheduling and will serve as the Department's primary Student Advisor.

Johnny Henderson won the SE Section Distinguished Teacher Award last year and gave an hour address at the joint AMS/MAA Sectional Meeting held at Georgia Tech in March. But during the summer, Johnny left Auburn for greener pastures in Texas, where he accepted the position of Distinguished Professor of Mathematics at Baylor University. Jo Heath has joined Jack Rogers (who is Director of the University Honors College) in the ranks of half-time AU Administrators when she was named Acting Associate Dean of the Graduate School. Krystyna Kuperberg received the highest award for research given annually at Auburn when she was named the Distinguished Graduate Faculty Lecturer and gave her hour address to the university faculty in April. Ms. Cyndee Carver, who was the 'Dean's Medalist' (i.e. Outstanding Senior) in Mathematics last year, will study for one year at England's University of Cambridge as a Gates-Cambridge Scholar before beginning medical school. Wlodek Kuperberg gave the keynote lecture at the MAA State Dinner Meeting, held at Samford University in February. Phil Zenor became Director of the Departmental GTA Training Program, a position previously filled by Ed Slaminka. Ed Slaminka was the recipient of the College's Outstanding Teaching Award and Greg Harris was the recipient of the College's Outreach Award. This past year, Ed started a pilot program called 'MathExcel' for 'at-risk' students who come from disadvantaged K-12 programs. The Alabama Legislature has approved a fairly generous 'Deferred Retirement Option Plan' (similar to plans in Florida and South Carolina). At least six of our 'mature' faculty have already enrolled (including your current correspondent).

The SIAM Council and Board unanimously approved our application to establish a SIAM university chapter at Auburn (only the 18th in the US). The Department now has a new Actuarial Science Option for the Applied Mathematics curriculum for the B. S. degree. Jerry Veeh is the Chair of the Actuarial Science Committee, which developed the Option. J. P. Holmes spent the spring and summer 2002 in San Diego working at the Center for Communication Research of the Institute for Defense Analyses. Michel Smith

**THE UNIVERSITY OF TENNESSEE, KNOXVILLE**

*The University of Tennessee, Knoxville offers Master' s and Ph.D. programs in pure and applied mathematics and invites applications for graduate student teaching and non-teaching positions for the 2003-2004 academic year.*

*SPECIAL AWARDS: The department offers Science Alliance Associateships and Dryzer Teaching Fellowships to outstanding candidates. Stipends for these range between \$12,326 and \$17,538 and in some cases offer a reduction in teaching duties.*

*STANDARD TEACHING APPOINTMENTS: They are the Graduate Teaching Assistantship for students with fewer than 18 hours of graduate credit in mathematics and the Graduate Teaching Associateship for more advanced students. Stipends for 2002-2003 range from \$12,326 - \$13,782 and may be increased for 2003-2004. The teaching load for each of these positions is 5 contact hours/week (on average) during each of two semesters. Tuition and maintenance fees will be remitted for both semesters and the subsequent summer term. As Ph.D. students with teaching associateships progress through the qualifying examinations, they receive both teaching reductions and an increase in the basic stipend.*

*GENERAL INFORMATION: Applicants for financial aid will be considered for all available awards. Recipients will continue to receive at least a standard assistantship after the initial award ends as long as satisfactory academic progress and teaching performance are maintained.*

*For further information about the department and application forms, contact Assistantship Committee, Department of Mathematics, University of Tennessee, Knoxville, Tennessee 37996-1300, e-mail: gradprogram@math.utk.edu or use a browser and view our web site at [www.math.utk.edu](http://www.math.utk.edu).*

UTK IS AN EE0/AA/TITLE IX/SECTION 504/ADA EMPLOYER

received an ‘Excellence Award 2001 -2002’ from the BellSouth Minority Engineering Program. Geraldo de Souza hosted his 18th annual (NSF-supported) Mini-conference on Harmonic Analysis in December. Frank Uhlig and Tin-Yau Tam hosted two conferences: the Sixth Workshop on Numerical Ranges and Radii and the (NSA-funded) 10th International Linear Algebra Society Conference. Ulrich Albrecht gave a presentation at the Festkolloquium for Prof. R. Goebel in Essen Germany. Andras Bezdek gave a talk at the Conference on Discrete Geometry in Moscow. Gary Gruenhagen gave invited hour talks at topology conferences in Lafayette, LA, and Austin, TX, and a half hour talk in Japan. Gary’s student, Strashimir Popvassevlev gave an invited talk at an AMS Special Session at the San Diego meeting and at the Summer Topology conference in New Zealand (travel supported by NSF grant). Georg Hetzer gave a plenary talk at the Second Workshop on Stochastic Climate Models, Chorin, Germany. Krystyna Kuperberg gave the principle lecture at a lecture series at the National University of Mexico, Mexico City. Wlodek Kuperberg gave a series of invited Lectures on convexity at the Renyi Mathematical Institute of the Hungarian Academy of Sciences. Wenxian Shen gave invited talks at conferences on differential equations and dynamical systems held in North Carolina, plus two invited talks in each of Canada and the P.R.C. Frank Uhlig had similar exposure, giving six invited talks on four continents. Krystyna Kuperberg has been named Managing Editor of *Topology and its Applications*. Narendra Govil has been appointed to the Editorial Board of the *International Journal of Nonlinear Differential Equations: Theory, Methods and Applications*. And Wenxian Shen has been appointed to the Editorial Board of *Far East Journal of Dynamical Systems*.

Thanks to the efforts of the Graduate Studies Committee and Graduate Program Officer, Andras Bezdek, we have enrolled eighteen new graduate students into the program: Chadia Affane Aji (Texas A&M), Shekendra Bailey (Tuskegee Univ.), Cicely Boothe (Tuskegee Univ.), Norou Diawara (Univ. South Alabama), Medhat El-Hadek (Auburn Univ.), Jason Ervin (Mississippi State Univ.), Li Fan (Capitol Normal Univ., China), Lisa Harden, (Jacksonville State Univ.), Mesgana Hawando (Auburn Univ.), Kang Jin (East China Normal Univ., China), Melinda Pell (Columbus State Univ.), Man Peng (Tianjin Univ. China), Kajal Shah (Auburn Univ.), Kalla Srinivas (Lankapalli Bullayya Postgrad College, India), Kelly Sweetingham (Univ. of North Carolina at Charlotte), Kate Thomas (Univ. of Texas, Dallas), Sarah Valentine (Auburn Univ.), and Sarah Westbrook (Columbus State Univ.). Four students finished their Ph.D.s during the year. They (along with their current positions) are: Don Baggett (Department of Defense), Maria Charina (Research Assistant, Institute of Applied Mathematics, Dortmund University, Germany), Charles Dolberry (Assistant Professor, Univ. Arkansas at Monticello), Strashimir Popvassilev (Instructor, Auburn Univ.), Ana Tameru (Instructor, Auburn Univ.). In addition, Lisa Peterson, who graduated a year ago, is now an Assistant Professor at Columbus State Univ. (GA). (Submitted by Jack Brown)



The University of Georgia

### Mathematics Department

**Research** – The University of Georgia Mathematics Department offers Doctoral and Master' s degrees in pure and applied mathematics. There are fifty research faculty, including ten postdocs. The department has strength in algebra, analysis, applied math, geometry, number theory, and topology. The *US News and World Report* ranks the number theory program in the top ten of the nation.

**Graduate Assistantships** – The department holds a National Science Foundation VIGRE grant to support the integration of undergraduate and graduate education with faculty research. VIGRE fellowships are available for US citizens and permanent residents and provide support for up to three years of the five-year PhD program. The VIGRE stipend is \$21,000 per year, including summer. Most other students admitted into the graduate program receive teaching assistantships; for the 2002-2003 academic year, these assistantships will pay \$12,616 – \$13,452. Additional summer support is also available. Students with teaching assistantships or VIGRE fellowships pay only \$25 per semester in tuition.

**Attractions** – Athens is a vibrant college town with a thriving downtown area and rich culture, which includes a world famous music scene. It is located sixty-five miles east of Atlanta and fifty miles south of the Appalachians.

**Contact Information** – Please visit [www.math.uga.edu](http://www.math.uga.edu) for additional information, or write to:

**Professor Joe Fu, Graduate Coordinator, Department of Mathematics**  
University of Georgia, Athens, GA 30602 (706-542-2211, [fu@math.uga.edu](mailto:fu@math.uga.edu))

**Auburn University at Montgomery (Montgomery, AL)**

James Kays, our department head for three years, has resigned to accept an appointment as Dean of Engineering and Applied Sciences at the Naval Postgraduate School in Monterey, California. Dan Marks is currently acting department head. The Bohn Lecture at Miami University, Oxford Ohio, was given by AUM's Joe Albree on October 5 of this year as part of the 30th Annual Mathematics and Statistics Conference. His title was 'Nicolas Pike's *Arithmetic* (1788) as the American *Liber abaci*'. The Bohn Lecture honors Professor Elwood Bohn, now retired but for many years the chair of Miami University's Mathematics and Statistics Department. Robert Underwood has completed his sabbatical year and is back at AUM. Pantelimon Stanica won AUM's School of Science Research Award. David Leach, an AUM graduate who majored in math, finished his Ph.D. in combinatorics at Auburn (main campus) in May, 2002, and is now an assistant professor in the Department of Mathematics, West Georgia College, Carrollton. Auburn's main campus had an unexpectedly large influx of freshmen this Fall. Several members of AUM's math faculty are commuting to Auburn three times a week to teach a calculus or precalculus class specially created to deal with this high enrollment. This opportunity to interact with mathematicians at the main campus (and to earn a little money!) is very much appreciated! (Submitted by Rhodes Peele)

**Augusta State University (Augusta, GA)**

It has been a very good year at Augusta State. Michelle Benedict, our MAA Student Chapter Advisor, won the Outstanding Faculty Award for Augusta State at Honors Night. This well deserved award came as no surprise to those of us who have worked with Michelle over the years. Sam Robinson and Cornelius Stallmann were granted tenure in the Department of Mathematics and Computer Science. Dee Medley was promoted to Associate Professor of Computer Science. Sam Robinson is serving as Acting Chair of the Department of Mathematics and Computer Science replacing former chairman Freddy Maynard who retired in July. Dr. Maynard has served in the department for 34 years and has been named Professor Emeritus Of Mathematics and Computer Science. The Annual Augusta State University Mathematics Contest will be on Pi-day, 3-14-2003. (Submitted by Gerald Thompson)

**Austin Peay State University (Clarksville, TN)**

Samuel Jator was promoted to Associate Professor and Bud Glunt was promoted to Professor. Tom Hamel has retired from the Department after 31 years of dedicated service to our Department and University. APSU was a host site for the Middle Tennessee Region Mathematics Contest for high school students in April. We will once again be a host site for this contest next April. We also host the annual APSU middle school mathematics contest in April of each year, rewarding and encouraging young students to study mathematics. Mary Lou Witherspoon is the new President of Middle Tennessee Mathematics Teachers and she is on the planning committee for the Teachers Teaching with

Technology International Conference to be held in Nashville in March 2003. Besides assuming these new responsibilities, Mary Lou will be making presentations at the regional NCTM conference in Paducah, KY in October, 2002 and the national NCTM conference in San Antonio, TX in April, 2003. Jim Vandergriff and five APSU students (Eric Cashwell, Cory Reeder, Gabriel Cooper, Kathryn Knisley, and Jeffrey Owen) presented papers at the ACM Mid-Southeast Chapter Conference in Gatlinburg, TN. Roberto Sisneros, a double major student (Mathematics and Computer Science) received an APSU Presidential Research Scholarship. Jonathan Groves participated in a summer REU (Research Experience for Under-graduates) at the College of William and Mary. (Submitted by Jim Vandergriff)

#### **Belmont University** (Nashville, TN)

The department continues its Mathematical Musings and Munchings presentation series during 2002-03. Shannon Mathis and Jim Cook are new full-time faculty at Belmont, serving in one-year positions. A group of faculty and students attended the SE MAA meeting in Atlanta, Spring 2002. Two of the students presented posters and one faculty member gave a talk. During the Spring 2002 semester, the department and the MAA Student Chapter sponsored showings of videos about Decoding Nazi Secrets and about the use of the Navajo language as the basis for a WWII code. Jennifer Rowe (graduated in May 2002 with a triple major in Mathematics, Computer Science and Physics) was accepted into the EDGE program for Summer 2002. The program helps women and minority students bridge the gap from undergraduate to graduate mathematics. After completing the EDGE program, Jennifer enrolled in the Mathematics Ph.D. program at the University of Kentucky. Mike Pinter was granted a sabbatical for the Fall 2002 semester. After the sabbatical, he will begin serving a 3 1/2 year term as the Belmont Teaching Center Director in January 2003. (Submitted by Mike Pinter)

#### **Carson-Newman College** (Jefferson City, TN)

Sherman Vanaman graciously agreed to come out of retirement to help us out this year; he's teaching for us on a one-year appointment to help us out with vacancies created by a resignation and a sabbatical. Henry Suters is taking the sabbatical--he's pursuing coursework in computer science at the University of Tennessee. Thomas Bass was promoted to Associate Professor of Mathematics. (Submitted by Thomas Bass)

#### **Central Carolina Technical College** (Sumter, SC)

Longtime Central Carolina Technical College Mathematics Department Chair, Cheryl Davids has been inducted into Clemson University's Eta Chapter of Alpha Epsilon Lambda, placing her among the top 0.05% of the graduate student body. Davids' recent membership with the graduate and professional student honor society recognizes her outstanding academic performance as she pursues her Ph. D. in higher education leadership at Clemson. (Submitted by Cheryl Davids)

**The Citadel** (Charleston, SC)

Margaret Francel has obtained her Ph.D. in Computer Science. This is her second doctorate, as she obtained a Ph.D. in mathematics some time ago. She and Spencer Hurd have returned from sabbatical and are back teaching at The Citadel. (Submitted by Dave Trautman)

**Columbia College** (Columbia, SC)

Lucy Snead won the college's Faculty Excellence Award for the academic year 2001-2002. Scott Smith was selected as the ODK Faculty Member of the Year for 2001-2002 by the college's chapter of the leadership fraternity. Department chair Nieves McNulty was granted tenure and promoted to Professor. (Submitted by Scott Smith)

**Columbus State University** (Columbus, GA)

We have three new full time faculty. Lisa Peterson accepted a tenure track position. She completed her Ph.D. at Auburn University in Probability. Ken Frerichs accepted a non tenure track position. He holds an MBA from Loyola University and is a retired vice president from TSYS. Karen Waters accepted a non tenure track position. She holds a Master of Education degree from Georgia State University. Ken and Karen previously had been teaching part time at CSU. Jerrel Yates retired in June. Tim Howard accepted a position as Assistant Department Chair. We will be hosting our annual invitational math tournament on March 1, 2003. Albert VanCleave will retire after Summer 2003. We are advertising a new tenure track position to be filled for Fall 2003. (Submitted by Tim Howard)

**Davidson College** (Davidson, NC)

Michael Mossinghoff joined our faculty in August, coming from UCLA where he taught mathematics and computer science. Before that, he was in this MAA section at Appalachian State. Richardson (Richie) King retired last May after thirty-eight years at Davidson. Todd Will is on leave; he and his wife Heather are teaching at the Univ. of Wisconsin LaCrosse. Richie, Ben Klein and Irl Bivens, continue as the editors of the problem section of the College Mathematics Journal; please contribute much needed problems! Stephen Davis and Ben took part in the AP Calculus Reading last summer and Ben continues on the AP Calculus Test Development Committee. Our Bernard Lecturer this fall was Underwood Dudley, editor of the CMJ. Our student awards went to senior Andy Schultz and sophomore Martin Turner. Two of last years seniors, Andy and Dana Paquin, went on to Stanford's graduate program in math. Dana was in the Budapest program last year and Kristin Nickel is there this year. (Submitted by Richard Neidinger)

**Duke University** (Durham, NC)

Duke University will host the 18th annual Geometry Festival from 13-16 March 2003. This conference will be held in honor of Phillip Griffiths, the director of the Institute for Advanced Study and former Provost at Duke. Last



The Department of Mathematical Sciences is accepting applications for the Master of Arts in Mathematics, newly designed for students interested in pursuing college teaching careers. The program of study follows the American Mathematical Association of Two-Year Colleges faculty preparation guidelines and provides an excellent mix of graduate level mathematics content with attention to the pedagogy of the college mathematics classroom. Assistantships and tuition waivers are available for qualified applicants.

Located in the scenic Blue Ridge Mountains, Appalachian is a comprehensive university of 13,100 students in Boone, North Carolina. The Department has 26 faculty holding doctorates whose research interests include algebra, approximation theory, complex analysis, differential equations, geometry, graph theory, logic, mathematical biology, numerical analysis, real analysis, statistics and topology, and pedagogical areas such as assessment, developmental mathematics, undergraduate mathematics reform, undergraduate statistics, and use of technology. For more information see <http://www.mathsci.appstate.edu/> or contact Dr. William C. Bauldry (BauldryWC@appstate.edu), 828-262-3050.



May, Duke hosted a conference on non-linear differential equations, mechanics and bifurcation with about twenty invited speakers. This conference was in honor of J.B. Duke professor David Schaeffer. Last July, associate professors Lang Moore and David Smith helped conduct the first of the MAA PREP workshops. Teams from around the world learned about interactive materials in mathematics during this internet-based workshop.

Robert Bryant, J.M. Kreps professor of mathematics, has been elected to the American Academy of Arts and Sciences. The AAAS is an international learned society composed of 3700 of the world's leading scientists, scholars, artists, business people and public leaders, about 200 of whom are mathematicians. Arlie Petters, William and Sue Gross associate professor of mathematics, is the first recipient of the Blackwell-Tapia Prize for his contributions to mathematical scientists and students from under-represented minority groups.

The team of David Arthur, Nathan Curtis, and Kevin Lacker finished third in the W. L. Putnam competition last year. Melanie Wood was awarded the Elizabeth Putnam Prize for highest score among participating females. Wood was also awarded the Alice T. Schafer Prize last January. The paper of David Arthur, Sam Malone and Oaz Nir was named Outstanding in the Mathematical Contest in Modeling last spring. Team members presented their results at the annual SIAM meeting in Philadelphia in July. This extends Duke's streak of Outstanding MCM papers to five. Math and Economics major, Sam Malone, was named Rhodes Scholar. He will study economics at Oxford. (Submitted by David Kraines)

#### **East Carolina State University** (Greenville, NC)

This year, there are two new additions to the mathematics department at ECU. Gail Ratcliff has joined the department as professor and chair, and Chal Benson as professor. The department has had a number of retirements as well. Robert Woodside, Joe Davis and Robert Joyner have retired. In addition, Katye Sowell has gone on phased retirement. The mathematics department has also changed through an administrative move. Mathematics education has been moved from the department of mathematics to the school of education. (Submitted by Chris Jantzen)

#### **Floyd College** (Rome, GA)

The Science and Mathematics Division of Floyd College has two new faculty members: Dr. Maurice Evans has been hired as Assistant Professor of Mathematics, and Mr. Alan Hagerstrand has been hired as a temporary instructor in mathematics to replace Dr. Long Wang, who is on leave this year to teach computer science for Georgia Tech. (Submitted by Jack Sharp)

#### **Francis Marion University** (Florence, SC)

New faculty this year are: Dr. Fangjin Arroyo, Ph.D., Mathematics, Graduate School of New York; MS. Renee' Dowdy, MS, Math Education, Francis Marion University (May 2002); Mrs. Leslie Denton, MS, Applied

Statistics, Purdue University; Mrs. Padma Naryan, MS, Mathematics, University of Bombay.

The Department obtained \$20,000 InterMath grant for the creation of eight Interdisciplinary Lively Applications Projects (ILAPS) to be published by the Consortium of Mathematics and its Applications (COMAP). To date, six ILAPS have been published. ILAPS are jointly developed projects across disciplines that can be used in the classroom. The following interdisciplinary projects may be found at <http://www.projectintermath.com>:· Chemical Equation Balancing (math, education, & chemistry), Survival of Early Americans (math & biology), Stocking a Fish Pond (math & biology), Genetic Markov Chain Models of Gene Transfer (advanced math and biology), Bridge Swinging (math and physics), College Tuition Programs--Can we do better? (math and economics)

Six faculty attended and presented at the 14th International Conference on Technology in Collegiate Mathematics (ICTCM) in Baltimore in October 2001 and will have their papers published in the 14th Annual Proceedings. Four faculty will attend and present at the 15th ICTCM in Orlando in October 2002. Three faculty attended and presented six talks at the Joint Mathematics Meetings in San Diego. Five faculty and two students attended and presented at the Southeastern Joint Mathematical Conference in Atlanta in the Spring 2002.· Five faculty and students (Jenny Michael and Katie Lathan) attended and presented at the South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meetings in Greenville in November 2001. Six faculty and students will be attending and presenting at the 2002 5th Carolina' s Conference in Charlotte. Seven mathematics faculty members have contributed to produce over fifteen articles published in Journals and Proceedings during this past academic year.· Three faculty members were leaders for this year' s Educational Testing Service' s Advanced Placement Program in Calculus.· Dr. West has been named Chair of Assessment and Pedagogy Strand and Dr. Fox named the Chair of Calculus Strand for the 2002-2003 ICTCM Conference sponsored by Addison Wesley Publishers. The mathematics department hosted the annual Pee Dee Mathematics Contest on April 24 lead by Dr. Schnibben and hosted a practice AP calculus test in early May by Dr. Allen.· Dr. Allen received a state grant to run an AP Calculus Institute at Francis Marion University again this summer.· Dr. Allen spent the fall at Western Carolina University on a sabbatical. This was the first sabbatical by a mathematics faculty in 32 years.

Dr. Fox was named as an associate editor for the CONSORTIUM Journal.· Dr. Fox is the associate director of the International Collegiate Mathematics Contest in Modeling. He and Dr. West co-wrote the "Airline Overbooking Scenario" for the 2002 modeling contest.· Dr. Fox (with Dr. Frank Giordano and Dr. Maurice Weir) published the 3rd edition of their textbook "A First Course in Mathematical Modeling" Brooks-Cole Publishers. Dr. Fox, Dr. Richardson, and Dr. Covington (Computer Science) have co-written several MAPLE applications of mathematics that have been published by MAPLE on their applications web site. (Submitted by Tom Fitzkee)

## MAA-SE Short Course Registration Form

A printable version of this form is available on the meeting website at

<http://www.math.clemson.edu/~clcox/MAA-SIAM>.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

E-mail/phone \_\_\_\_\_

Indicate your preference of course by checking the appropriate line; if you have more than one choice, indicate your first choice as 1, your second as 2, etc.

\_\_\_\_ Perfect Partners: Mathematical Modeling, Discrete Dynamical Systems, and Technology

\_\_\_\_ Computational Genomics

\_\_\_\_ Algebra and number theory in Cryptography

\_\_\_\_ Computational Modeling in Service of Undergraduate Teaching

\_\_\_\_ Enhancing Logical Reasoning through Lego Robots,

\_\_\_\_ Miles of Tiles-Patterns in the Plane

Mail this completed form with a check **payable to the MAA** in the amount of \$20.00 (non-refundable) before **March 1, 2003** to

## Short Courses

**Title: Perfect Partners: Mathematical Modeling, Discrete Dynamical Systems, and Technology**

**Presenter:** . William P. Fox and Richard West, Francis Marion University

**Abstract:** We begin our discussion of discrete dynamical systems (DDS) with a simple discrete model of a prescribed drug in our system. We will examine equilibrium points, stability, and long-term behavior. Next, we model a simple population model for growth or extinction of a species. Then we enhance our population model to include nonlinear terms and perhaps (with the right choice of coefficient) a view of chaos. We conclude with systems of DDS and either the competitive hunter model or predator-prey model for a particular scenario. Bring your TI-83 Plus graphing calculators so you can experience the building, numerical solutions, and graphing of these types of discrete mathematical models.

**Title: Computational Genomics**

**Presenters:** Laurie Heyer, Davidson College

**Abstract:** The interdisciplinary field of computational molecular biology, sometimes called bioinformatics, is an exciting and active research area for mathematicians, computer scientists and biologists. We provide an overview of the field, exploring in greater detail some of the data analysis methods that are useful in the study of genes and their expression. Prior biological knowledge is not required.

**Title: Algebra and Number Theory in Cryptography**

**Presenter:** Shuhong Gao, Clemson University

**Abstract:** Modern schemes for secure digital communications (including storage) are mostly based on algebraic structures. These structures include groups, rings, finite fields, vector spaces, lattices, elliptic curves, etc. In this short course, we show some of the roles that algebra and number theory play in public key cryptosystems and their cryptanalysis. Part of the presentation will be computer demonstration in Maple.

**Title: Computational Modeling in Service of Undergraduate Teaching**

**Presenter:** Dan Warner, Clemson University; Holly Hirst, Appalachian State University; Robert Panoff, Shodor Education Foundation

## **SHORT COURSES**

Six Short Courses will be offered Friday morning from 8:30 - 11:30.

- Perfect Partners: Mathematical Modeling, Discrete Dynamical Systems, and Technology, by William P. Fox and Richard West, Francis Marion University
- Computational Genomics, by Laurie Heyer, Davidson College
- Algebra and Number Theory in Cryptography, by Shuhong Gao, Clemson University
- Computational Modeling in Service of Undergraduate Teaching, by Dan Warner, Clemson University, Holly Hirst, Appalachian State University and, Bob Panoff, Shodor Foundation,
- Enhancing Logical Reasoning through Lego Robots, by Nieves McNulty and Madeleine Schep, Columbia College
- Miles of Tiles-Patterns in the Plane, by Steve Edwards, Southern Polytechnic State University

Reservations for one of these courses should be made by completing the top half of the enclosed form and returning it with a \$20 non-refundable fee by March 1, 2003 to Martha L. Abell, MAA/SE Secretary/Treasurer, P.O. Box 8130, Georgia Southern University, Statesboro, GA, 30460, [martha@gasou.edu](mailto:martha@gasou.edu), 912-681-0357. Enrollment in each course may be limited. Admission to any course without reservation is on a space-available basis. A printable version of the registration form is available on the conference website at <http://www.math.clemson.edu/~clcox/MAA-SIAM>.

## **T.A. RUSH**

T.A. Rush provides an opportunity for students to meet with representatives of graduate programs. If your institution wishes to participate and to be listed in the program as a part of T.A. Rush, notify Doug Shier, Clemson University, phone: (864) 656-1100, email: [shierd@clemson.edu](mailto:shierd@clemson.edu) by January 31, 2003. This event is scheduled for 11:15-12:45 on Friday in conjunction with a pizza lunch for students. There is a \$25 fee for each participating graduate institution.

## **SOCIAL EVENTS:**

Coffee and doughnuts will be available during breaks throughout the meeting.

A barbecue & chicken dinner will be held Friday evening at the Clemson House, within walking distance of the meeting site, after the awards presentation. See the map at <http://www.clemson.edu/welcome/campmap/> for directions. Additional restaurants in the Clemson area are listed at

<http://www.lake-hartwell.com/services/Restaurants/restaurants.htm#Clemson>.

MAA is sponsoring a *Celebrity Jeopardy* contest (with faculty contestants) immediately following dinner. Anyone interested in helping with this event should contact Theresa Early, [earlyte@appstate.edu](mailto:earlyte@appstate.edu).



**Joint Meeting  
Southeastern Section MAA  
&  
SIAM SE Atlantic Section  
March 21-22, 2003  
Clemson University  
Clemson, SC**



**MEETING ANNOUNCEMENT:**

The eighty-second annual meeting of the Southeastern Section of the Mathematical Association of America is a joint meeting with the SIAM Southeast Atlantic Section. It will be held on Friday afternoon, March 21 and Saturday morning and afternoon, March 22, 2003. The Association invites all interested persons to attend this meeting and requests the assistance of all department chairs, faculty, and members of the Section in providing publicity. Both pre-registration and on-site registration will be available for all MAA and SIAM members, entitling everyone who is registered to attend all talks Friday and Saturday, with the exception of Friday morning short courses for which there is a separate pre-registration.

**INVITED SPEAKERS:**

- John Baxley, Wake Forest University, Section Lecturer
- Ron Graham, AT&T Bell Labs
- Ronald Harshbarger, USC-Beaufort, Southeastern Section MAA 2002 Distinguished Teaching Award
- Margaret Wright, Courant Institute

**CALL FOR CONTRIBUTED PAPERS AND SPECIAL SESSIONS:**

Both research and expository papers in the areas of mathematics, (pure, industrial and applied), the teaching of mathematics, and mathematics education are solicited for the program. Titles and abstracts should be sent to Chris Cox, (0-106 Martin Hall, Box 340975, Clemson University, Clemson, SC, 29634-0975, or [clcox@clemson.edu](mailto:clcox@clemson.edu)) and must be received no later than **January 31, 2003**. Please indicate the general mathematical area of the paper on the abstract. For contributed papers, twenty minutes total are allowed for the presentation of each paper. Contributed paper sessions for presentations by students, graduate or undergraduate, will be specially designated as well. For the general mathematical area, please indicate if it is a student paper. Anyone interested in organizing a special session on a specific topic should send a title and description of the special session, by January 13<sup>th</sup>, to Mark Cawood, (0-106 Martin Hall, Box 340975, Clemson University, Clemson, SC, 29634-0975, or [cawood@clemson.edu](mailto:cawood@clemson.edu)).

**POSTER SESSION ON UNDERGRADUATE RESEARCH:**



**PREREGISTRATION, ON-SITE REGISTRATION AND PROGRAM:**

The fee structure is:

- \$25 registration fee for faculty
- \$5 registration fee for students and emeritus faculty
- \$15 registration fee for high school teachers (high school students may attend at no cost)
- \$10 for Friday evening dinner (optional)
- \$8 for Saturday boxed lunch (optional)

This joint meeting will have a full program. The program will be available around February 15th at the meeting web site. Most of the sessions will be held in Brackett Hall (found on the campus map at <http://www.clemson.edu/welcome/campmap/>).

**HOTEL INFORMATION:**

Participants should make their own arrangements directly with a hotel of their choice. Blocks of rooms have been reserved (until February 27<sup>th</sup>) at \$64 at the three properties listed below for the nights specified. Please cite the group name **MAA/SIAM Math Conference** when making a reservation. Accommodations have varying cancellation or early checkout penalties; be sure to ask details when making your reservation. Contact information for these and other area accommodations is provided on the web page

<http://www.clemson.edu/welcome/vcenter/center/stayhere.htm>

The MAA and SIAM are not responsible for rate changes or for the quality of the accommodations.

**Motels with Rooms Blocked for the Conference:**

**Ramada Inn, Clemson** (75 rooms blocked Thursday night and Friday night)

**Comfort Inn, Clemson** (25 rooms blocked Thursday and 91 rooms Friday)

**Sleep Inn, Clemson** (25 rooms blocked Friday),

**TRANSPORTATION:**

Directions to Clemson are available at the website <http://www.clemson.edu/welcome/directions.htm>

**UPDATES:**

Meeting updates can be found at the website

<http://www.math.clemson.edu/~clcox/MAA-SIAM>



**Abstract:** This short course will demonstrate several tools and computational models that can be used to enhance Undergraduate Teaching. Particular emphasis will be placed on how these computational models can be used to support inquiry based learning in traditional mathematics courses.

**Title: Enhancing Logical Reasoning through Lego Robots**

**Presenter:** Nieves McNulty and Madeleine Schep, Columbia College

**Abstract:** In this hands-on short course on the use of LEGO Mindstorm robotics kits we will show how robots work and how they are programmed. We will write programs in NQC (not quite C), developed by Dave Baum with a graphic user interface created by Mark Overmars, and go through some hands-on activities that we have developed for an introduction to programming concepts. These labs address the problems of students with weak logical reasoning and lack of attention to details. Students find working with robots interesting and fun. But the real advantage of using robots is that the students get immediate feedback when they make a mistake in syntax or logic. (These lab activities are part of a project funded in part by an ILI grant from NSF).

**Title: Miles of Tiles-Patterns in the Plane**

**Presenter:** Steve Edwards, Southern Polytechnic State University

**Abstract:** This course will be an introduction to periodic and aperiodic tiling in the plane. It will include definitions of symmetry and tiling in the plane, history, elementary theorems and Penrose tiles and their seemingly paradoxical properties. All this will be lavishly illustrated with contemporary and historical images.

**Registration Form on back of this sheet**

the SECRETARY:

Martha L. Abell, Secretary-Treasurer  
MAA Southeastern Section  
P O Box 8130  
Georgia Southern University  
Statesboro, GA 30460

**Furman University** (Greenville, SC)

Our department welcomed a new faculty member this year. Kevin Hutson received his Ph.D. from Clemson University in 2002, and we are happy to have him with us. Mark Woodard was awarded a Fulbright Scholarship, and he is spending this year at the University of the West Indies in Barbados. Marty Cook has been appointed the new chair of our department. We appreciate his service as well as that of Doug Rall, his predecessor. Our 2002-2003 Clanton Visiting Mathematician was Frank Morgan of Williams College. During his visit in September, he gave two presentations concerning the "Double Bubble Conjecture," and he was able to spend time visiting with students and faculty. We continue to be proud of our students. Of the four seniors who were given special honors at last year's commencement, three of them were majors in our department. (Submitted by John Harris)

**Gainesville College** (Gainesville, GA)

Beata Hebda is the division coordinator this year while we search for a new chair. Charles Fowler received tenure and Jerry Graveman was promoted to assistant professor. Ram Subedi and Anthony Parker join our department this year as instructors. The annual math tournament will be held April 12, 2003. (Submitted by Gina Reed)

**Georgia Perimeter College, Clarkston Campus** (Decatur, GA)

Mary Ellen Davis, Andrea Hendricks, and Dr. Anant Honkan were promoted to Associate Professors. Alice Pierce received tenure. New faculty are Dr. Charles Brown in Mathematics and Diana Spence in Computer Science and Mathematics. Charles Stone is the Interim Department Chair. The 16th Annual Georgia Perimeter College Mathematics Conference will be held Feb. 7 - 8, 2003. Jackie Thornberry is the Publications Editor of the AMATYC Review. Emily Whaley is serving on the editorial board for the AMATYC Review. (Submitted by Virginia Parks)

**Georgia Southern University** (Statesboro, GA)

We have the following new hires this year in tenure-track positions: Francis Jordan (Ph.D. from West Virginia University), Youming Li (Ph.D. from Univ. of Kentucky), Viktor Maymeskul (Ph.D. from University of South Florida), and Narasimha Murty (Ph.D. from Andra University). We said good-bye to John Davenport, who retired after 20 years service and moved to Oklahoma. In December, we will bid farewell to Pam Watkins who will retire after 25 years service due to her husband's transfer to Lancaster, PA. It was also announced last year that we will be saying "so long" to all of our Computer Science colleagues at the end of this year. They will be joining the newly-formed College of Information Technology. Dr. Lila Roberts is acting Department Chair this year. Due to the decision of our Dean, Jimmy Solomon, to step down at the end of this year and return to teaching mathematics, we will not be having a search for a new chair this year. Our 14th annual Mathematics Tournament for middle and high schoolers was held February 9, 2002. We had

**NC STATE UNIVERSITY**

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**Visitors to the Mathematics Department are always welcome.  
Faculty and students will be glad to meet with you, share their ex-  
periences and answer your questions.**

over 800 students participate. This year's tournament will be held on March 1, 2003. (Submitted by Patricia Humphrey)

**Jacksonville State University** (Jacksonville, AL)

This year, the department will continue to conduct the Alabama Statewide Mathematics Contest (<http://mcis.jsu.edu/mathcontest>), which is directed by Jeff Dodd. The Alabama Council of Teachers of Mathematics (ACTM) and the Alabama Association of Teachers of Mathematics (AACTM), which sanction the contest, are searching for a new director of the contest, beginning with a transitional year in the 2003-2004 academic year. (See the contest web site if you are interested in this position.) The department will also host the Calhoun County Math Tournament, and will help administer the Alabama Science Olympiad.

The department colloquium series has been continuing apace with visits in the Spring of 2002 from Wlodzimierz Kuperberg of Auburn University and Bernadette Mullins of Birmingham Southern College. Jeff Dodd was awarded the JSU College of Arts and Sciences "Distinguished Service Award" in May of 2002, and was promoted to Associate Professor effective October 2003. Tom Leathrum is serving the MAA's Journal of Online Mathematics and Its Applications (JOMA) as the Developers' Area Contributing Editor. His "Mathlets", <http://cs.jsu.edu/mcis/faculty/leathrum/Mathlets/>, have been well reviewed in Merlot, another major collection of peer reviewed online resources, and continue to be used by Addison-Wesley in several of their mathematics texts. Tom is also in demand as a speaker on the pedagogical use of Java applets. Tom Leathrum and Jeff Dodd are both serving as organizers for special sessions at the AMS-MAA Joint meetings in Baltimore in January. Finally, our department has acquired four new faculty members. Jaedeok Kim and Youngmi Kim, having just finished their Ph.D.s at the University of Alabama at Tuscaloosa, have joined us as tenure-track Assistant Professors. Daniel Smith and Rhonda Wilks have both returned to their alma mater to join the faculty as instructors. (Submitted by Jeff Dodd)

**Kennesaw State University** (Kennesaw, GA)

Our new department chair is Dr. Danny Lau, he comes to us from Gainesville College. Dr. Jun Ji, previously of Valdosta State University, is a new Associate Professor of Mathematics. Dr. Bo Yang is a new Assistant Professor of Mathematics who received his Ph.D. from Mississippi State University in 2002. Ms. Belinda Pickett Edwards is a new instructor. She has her M.S. from the University of North Florida 1995 and is currently a Doctoral Student at Georgia State University. Mr. Ron Hoover is a new Instructor who has worked for us on a temporary basis for the last two years. We also have four temporary instructors: Ms. Teresa Banker recently received her Ph.D. from the University of Georgia; Mr. Brad Feldser comes from the private sector (retired); Ms. Luba Sengova comes from Gainesville College; and Mr. Bruce Thomas was previously a part time instructor. Dr. Barbara Ferguson was promoted to Associate Professor of Mathematics and Mathematics

Education. Dr. Dave Morgan retired in May 2002. (Submitted by Virginia Watson)

**King College** (Bristol, Tennessee )

Professor Bill Linderman is running in the New York Marathon on November 3, 2002. Professor Dan Fetters has nearly finished work on a second master's degree, this one in computer science from nearby East Tennessee State University. Professor Andy Simoson has an article "The gravity of hades" appearing in the December 2002 issue of the MAA's Mathematics Magazine. (Submitted by Andrew Simoson)

**Louisburg College** (Louisburg, NC)

Dr. Martha Farmer Bragg, Professor of Mathematics and Chair of the Division of Mathematics and Science at Louisburg College, has received the 2002 Naomi Dickens Shaw Faculty Teaching Excellence award. It is the highest honor which the college bestows on a faculty member. (Submitted by Martha Farmer Bragg)

**Mercer University** (Macon, GA)

On October 7, 2002, Dr. Julie Barnes of Western Carolina University presented a talk on "Functional families and forbidden sequences" to 55 Mercer students and faculty. The Eighteenth Annual Mercer University High School Mathematics Contest will be held on November 9, 2002. (Submitted by Curtis Herink)

**Meredith College** (Raleigh, NC)

The department changed its process for placement of freshmen into their first Mathematics courses. We had used a placement examination during orientation week but this adds to the anxiety of entering freshmen. Starting with 2002, we have placed entering students through SAT scores, ACT scores, high school mathematics courses and grades, and intended majors. Nearly half of the senior math majors and several juniors participated in Meredith's new Undergraduate Research Program. For their project, Katie Haas and Anna Vernon produced the design of the Penrose tiling for the atrium floor of the new Science and Mathematics Building scheduled for occupancy in January 2003. Lara Stroud presented the results of her project "Modeling Trichloroethylene" during the Pi Mu Epsilon sessions at MathFest in Burlington, Vermont in August, 2002.

As part of Meredith College's new technology initiative, Jennifer Hontz and Alicia Schlintz offered a workshop on TI-Interactive for faculty from Mathematics, Biology, Chemistry, and Human Environmental Sciences Departments. The workshop lasted for a full day in late May. Then in late July we met again for two half day work sessions where faculty from these departments worked on projects using TI-Interactive! These projects included college algebra worksheets, statistics assignments, and in-class demonstrations for biology. TI-Interactive will be used in the introductory College Algebra

and Function & Graph courses. Dr. Jo Guglielmi was chosen to present the 2002 Meredith College Faculty Distinguished Lecture. For the first time in its five year history, Math Week at Meredith attracted a full house of twenty girls. It is a residential program for rising high school sophomores and is directed by Virginia Knight and administered by Jennifer Hontz. Dr. Martha Bouknight and Dr. Jo Guglielmi retired. Dr. Timothy Hendrix and Dr. Paul Schuette were appointed to tenure track positions. (Submitted by Vivian Kraines)

#### **Morehouse College** (Atlanta, GA)

During the spring semester 2002 after a national search, Dr. Marsilamani Sambandham was named Chair of the Department of Mathematics at Morehouse. Professor Sambandham has extensive research experience in probability analysis and applications. He has published one book on Random Polynomial and over forty five research articles in the areas of random polynomials and random differential equations. Dr. Sambandham has been a member of the Morehouse Mathematics Faculty since 1984. The mathematics department welcomed one new faculty member in the fall 2002. Dr Duane Cooper came to Morehouse from the University of Maryland, College Park. Dr. Cooper received his B.S. degree in mathematics from Morehouse and the Ph.D. in mathematics from the University of California at Berkeley. During the period August 7-10, 2002, the department of mathematics at Morehouse sponsored and hosted the Second International Conference on Neural, Parallel and Scientific Computations. Approximately seventy-five mathematicians and scientists from over twenty-five countries attended the four-day conference on the Morehouse College campus. (Submitted by: R. E. Bozeman)

#### **North Carolina A&T State University** (Greensboro, NC).

Dr. Gilbert Casterlow, Jr. was promoted to the position of Interim Assistant Vice-Chancellor for Summer Sessions and Outreach. He served the mathematics department for about 31 years, many of those years as Mathematics Education Coordinator. Dr. Bampia Bangura was appointed as an Associate Professor, and Mathematics Education Coordinator, beginning July 2002. Dr. Tracey Tullie was appointed as an Assistant Professor, beginning July 2002. Dr. Tullie earned his Ph.D. from North Carolina State University, specializing in financial mathematics. Dr. Lee Emmanwori was appointed Visiting Lecturer beginning July 2002. He has completed a Ph.D. in mechanical engineering at North Carolina A&T State University. Dr. Robert Mers is a second vice-chairman and member of the steering committee of the North Carolina State Employees Combined Campaign at North Carolina A&T State University. Dr. Errol Rowe resigned from his position in the NCA&T mathematics department and accepted a research position with the Navy in Rhode Island. Dr. Dominic Clemence and Dr. Kathy Cousins-Cooper were appointed to the College of Arts & Sciences Curriculum Committee for the academic year 2002-2003. Dr. Guoqing Tang was appointed to the College of Arts and Sciences Faculty Development Committee for the academic year



### Graduate Programs

Programs leading to MA and PhD degrees are available in Algebra, Analysis, Applied Mathematics, Approximation Theory, Control Theory, Differential Equations, Probability, Statistics, Theoretical Computer Science, Topology and other areas.

### The Department

The research of our 28 faculty members represent most areas in pure and applied mathematics. The Department includes *The Institute for Constructive Mathematics* which performs applied research for government and industry. Three international journals have their editorial base at our department: *Constructive Approximation*, *Abstract and Applied Analysis* and *Journal of Theoretical Probability*.

### Financial Assistance

- A limited number of University Graduate Fellowships of minimum \$11,000 for 9 months are available for **new students** starting Fall 2002. They carry a tuition waiver and no service for the department is required. Funds can be supplemented with a partial Teaching Assistantship.
- Teaching Assistantships with minimum of \$12,000 for 9 months with tuition waiver are available. Students holding these awards perform instructional duties for the Department. Summer Teaching Assistantships are also available.
- A limited number of students are awarded Tharpe Scholarships in addition to their Teaching Assistantship or Graduate Fellowship. These awards range from \$2,000 to \$5,000.

### The University and Tampa

The University of South Florida is a large and diverse community with the main campus on 1,748 acres located on the outskirts of Tampa. The warm sunny climate allows outdoor activities throughout the year. Tampa Bay is a resort area offering numerous recreational and cultural attractions.

**For more information:** **visit:** [www.math.usf.edu](http://www.math.usf.edu), **call:** 813-974-9566 or 813-974-5329, **e-mail:** [ga@math.usf.edu](mailto:ga@math.usf.edu), **write:** Graduate Admissions Director, Department of Mathematics, University of South Florida, PHY114, Tampa FL 33620-5700.



2002-2003. In addition, he is also serving on the College's Administrative Council, Interdisciplinary Research Council, and Advisory Council. Dr. Dominic Clemence and Dr. Janis Oldham were elected to the College of Arts & Sciences Committee for Tenure and Promotion for a three-year term beginning Fall 2002.

Dr. Kathy Cousins-Cooper completed her Juris Doctorate (J.D.) degree from the Evening Program at North Carolina Central University School of Law on May 11, 2002. She graduated with honors and passed the North Carolina State Bar Exam July 31, 2002. In addition she has been sworn in to practice law in both the North Carolina state courts and federal court. Dr. Cousins-Cooper worked as a full-time professor in the Mathematics Department at NCA&T the entire time she was earning her degree. In addition to a full teaching load (12.0 hours) Dr. Cousins -Cooper, during the 2001-2002 academic year coordinated the math department's preparation for the NCATE review.

Grantsmanship and research activity have exploded among the mathematics faculty at NCA&T. Dr. Giles Warrack received an ONR/ASEE Summer Faculty Research Fellowship Grant to work with Dr Roy L. Streit of the Naval Undersea Warfare Center, Newport, RI. The grant was for a ten week period, and the time was spent working on problems involved with submarine tracking. Dr. Alexandra Kurepa has received a grant from the Mathematical Association of America and the Tensor Foundation as part of the Women and Mathematics Project. The grant will support two conferences, in the fall and spring of the 2002-3 academic year. Dr. Kathy Cousins-Cooper is a Co-PI for the National Science Foundation Grant, funded September 19, 2002, entitled "Student Pipeline - Computer Science, Mathematics, Engineering, and Technology (CSMET) Scholarship Program. "The grant is for \$399,960, through a period ending March 2006. It will provide scholarships for freshmen and sophomore CSMET students to bring them into the "pipeline" eventually leading to advanced degrees such as the Ph.D. Dr. Kathy Cousins-Cooper is the Co-PI (with PI Dr. Jung Hee Kim of the Computer Science Department) of the grant "Language Analysis and Generation in Algebra Tutorial Dialogue for Language - Based Intelligence Tutoring Systems". The grant is sponsored by the Office of Naval Research, for \$170,000. The grant period is December 2001 through September 2003. Dr. Cousins-Cooper selects and tutors the algebra students, which provides a transcript for the development of the dialogue to be modeled in the software being developed. Dr. Guoqing Tang has received an IGMS grant (\$99,851), (8/1/02-7/31/03) , from National Science Foundation entitled, "Physical Insight and Mathematical Methods in Seismic Data Analysis." The grant allows him to be on leave from the mathematics department, and spend one-year in physics department doing collaborative research in applied seismology. Dr. Dominic P. Clemence has received a three-year Faculty Award for Research (FAR) grant from NASA (Johnson Space Center) for development of solution algorithms for flow models relevant to NASA applications. (\$300,000.) Dr. Guoqing Tang and Dr. Dominic Clemence have been collaborating with Dr.

Caesar Jackson and Dr. Van Burbach of Physics Department at NC A&T to develop interdisciplinary research and educational programs in geosciences. They are Co-PIs of two grants from the National Science Foundation (\$134,601 for 10/1/02-9/30/04) and the U.S. Department of Education (\$297,097 for 10/1/02-9/30/05), respectively, in developing and enhancing A&T geoscience research infrastructure and student research and training. Currently, there are seven students from physics, mathematics, and engineering working with the group on its research training program consisting of research topic seminars, field geophysical surveys, research projects involving seismic physical modeling, computational modeling and simulation, and surveying data analysis. Dr. Dominic P. Clemence is PI for an NSFG grant entitled "Incorporating Technology and MultiDisciplinary Applications in a team-taught Lecture-Laboratory Calculus Class: Phase I". Co-PI's are Dr. Shea Burns, Dr. Minxiang Chen, Dr. Guoqing Tang, and Dr. Janis Oldham. The period is 7/1/02 through 6/30/04, and the amount is \$80,676.

Dr. Guoqing Tang served as the College of Arts and Sciences' ten week Summer REU Program Director during the summer 2002, coordinating summer undergraduate research activities sponsored by the SPGRE Program of UNC Chapel Hill, Talent-21 Project of NC A&T, and NC OPT-ED Alliance and supervising student research projects. Six participants of the Summer REU Program came from four institutions from North Carolina and Texas. Dr. Dominic Clemence of the Mathematics Department served as a senior research scientist for the program.

Dr. Tracey Tullie moderated a panel discussion on the topic "Mentoring in an Academic Environment" at the Alabama Alliance for Minority Participation Graduate Fellows Research Conference, held at University of Alabama, Birmingham on October 8, 2002.

Dr. Shea D. Burns served as Calculus Instructor for the 2002 N.C. A&T SMET Summer Institute sponsored by the TALENT-21 program. The program dates were July 7-August 2, 2002. This program is designed to prepare entering freshman for success at North Carolina A&T State University in the College of Arts and Sciences Program. In addition, Dr. Shea D. Burns was a participant in the NC A&T Academy for Teaching and Learning Summer Academy for Faculty Teaching Freshman (SAFTF). This program was designed to build a learning community of faculty teaching freshman level courses. Dr. Shea D. Burns was also a participant in the 2002 ECSU-NAM Faculty Summer Training Workshops in Computational Science-Scientific Visualization held at Elizabeth City State University's Computational Science Scientific Visualization (CSSV) Center. The education/research training sessions included tutorials in the following categories: Data and Image Manipulation, Computational Science: Tools and Techniques, Computer Programming Languages, Web Page Development, and Presentation/Publication Tools.

Dr. Janis M. Oldham served as a panelist for the 2002 National Science Foundation Graduate Research Fellowship Program (GRFP). She served on the Mathematics Panel. Dr. Janis M. Oldham is a member of the



UNIVERSITY OF  
**SOUTH CAROLINA.**

### **The Department of Mathematics**

The Department offers graduate programs leading to the M.S., M.A., and Ph.D. degrees in Mathematics. In addition there are teaching oriented non-thesis degrees: the Master of Mathematics and Master of Arts in Teaching.

Areas of emphasis in pure mathematics include algebra, analysis, differential geometry, logic, number theory and topology. Emphasis in applied mathematics is offered in approximation theory, differential equations, discrete mathematics, numerical analysis, and optimization.

The Industrial Mathematics Institute in the Department fosters advanced research in areas of mathematics having the capacity or potential for industrial application.

### **Financial Aid**

The Department expects to award 12 teaching assistantships for Fall 2003 with academic year stipends ranging from \$14,000 to \$15,100. Assistantships require three to five contact hours per week. Summer support is available. Outstanding applicants will receive consideration for fellowships which supplement Departmental support. These include a renewable Graduate School Fellowship and the renewable \$3,500 College of Science and Mathematics Fellowship.

For information and application materials, write to

Director of Graduate Studies  
Department of Mathematics  
University of South Carolina  
Columbia, SC 29208

Home page: <http://www.math.sc.edu/>

Email: [graddir@math.sc.edu](mailto:graddir@math.sc.edu)

MAA Program Committee for the 2004 Joint Mathematics Meetings in Phoenix, AZ. The role of the MAA Program Committee is to recommend MAA-invited speakers for the joint meetings. Dr. Oldham is also a member of the MAA Committee on Consultants.

Mr. Courtney Davis completed his Masters project at NASA Langley Research Center during the summer of 2002 under the supervision of Dr. Dominic Clemence, and Dr. William Prosser of NASA. His topic of research was Acoustic Emission Wave Modeling.

On April 11, 2002 the Math department once again hosted high school students participating in the state high school math contest. NCA&TSU is a regional site. Dr. Gilbert Casterlow coordinates the effort, with assistance from the NCA&T chapter of Pi Mu Epsilon, and faculty volunteers. The effort is jointly sponsored by the NCA&TSU Math Department, Pi Mu Epsilon, and GAMSEC (Greensboro Area Mathematics and Science Education Center.) On April 18, 2002, the NCA&TSU Mathematics Department held its seventh annual Mathematics Awareness Day. The event was organized by Dr. Alexandra Kurepa and featured graduate and undergraduate student presentations and a faculty development workshop. The NCA&TSU Department of Mathematics hosted an NSF-CBMS Regional Conference "The Mathematical Methods in Nonlinear Wave Propagation." The Conference, held May 15-19, 2002 at Marteen Hall, revolved around ten one-hour lectures delivered by Professor J. Kenneth Shaw of Virginia Tech (Departments of Mathematics and Electrical & Computer Engineering) on the subject of wave propagation as motivated by the study of the propagation of pulses through nonlinear optical fibers. An intended outcome of the conference is that it will act as an incubator for mathematical and interdisciplinary collaborative activities among established and new researchers in Mathematics, Physics, and Engineering. In addition to the principal lectures, there were invited lectures in nonlinear mathematics and fiber optics by Tuncay Aktosun (Mississippi State University - Mathematics), Bolindra N. Borah (North Carolina A&T State University - Mathematics), Sin-Chung Chang (NASA Glenn, CFD) Martin Klaus (Virginia Tech - Mathematics), Ronald Mickens (Clark - Atlanta University, Physics), Ching Y. Loh (Taitech Inc., CFD), William H. Prosser (NASA - Langley, NDE), Jianke Yang (University of Vermont - Mathematics). The conference organizers were Dominic P. Clemence and Guoqing Tang Local Organizing Committee consisted of Shea D. Burns, Mingxiang Chen, Dominic P. Clemence (Co-Chair), Janis M. Oldham, and Guoqing Tang (Co-Chair). This regional research conference was mainly financially supported by a grant from the National Science Foundation. Additional support was received from the College of Arts and Sciences Talent-21 Project, the Mathematics Department, and the College of Engineering' s NASA Center for Aerospace Research at North Carolina.

Summer 2002, Dr. Dominic Clemence completed his fifth year as NC A&T faculty coordinator for the NASA SHARP (Summer High School Apprenticeship Research) Plus program, hosting twnty high school students. (Submitted by Janis Oldham)

**North Carolina State University (Raleigh, NC)**

We have seven recently retired faculty: Ernie Burniston, Richard Chandler, Joe Dunn, Dennis Garoutte, Jiang Luh, C. Vin Pao, and Robert Silber. There are six new faculty. Robert Buche is in stochastic processes and their applications, particularly in control and communication systems. Alina Chertock is in free boundary problems for nonlinear PDEs, focusing on analytic asymptotic methods and high-resolution numerical methods, numerical methods for time dependent PDEs, hyperbolic conservation laws, degenerate parabolic equations, and numerical analysis. Min Kang is in probability theory and partial differential equations, in particular, interacting particle systems and stochastic partial differential equations. Negash Medhin: develops molecular based models for hysteresis in elastomers and control theory. Current work is in application of control theoretic molecules through infrared excitation. Tao Pang is in Stochastic control theory, financial mathematics, applied probability, etc. Agnes Szanto is in symbolic computation. Current work is on algorithms for the solution of non-linear equation systems. (Submitted by Bisa Meek”

**Pellissippi State Technical Community College (Knoxville, TN)**

The Mathematics Department welcomes two new full-time temporary faculty members: Harry Ambrose, Master of Mathematics, University of Tennessee, Knoxville, and Charles Sterner, Master of Arts in Teaching Mathematics, Michigan State University. Four faculty members were promoted last year: Dr. Mary Monroe-Ellis and Dr. Bobby Coleman to Professor; Judy Ahrens to Associate Professor; and Jonathan Lamb to Assistant Professor. Meg Moss has been appointed program coordinator for Teacher Education. Jackie Vogel earned her doctoral degree in Education at the University of Tennessee, Knoxville. Dr. Leon Jones and Bob Pesut will retire at the end of the fall and spring semesters, respectively. During his seventeen years at the College, Dr. Jones has served in the positions of math faculty and Vice President of Academic Affairs. Mr. Pesut will complete thirteen years as a math faculty member.

Judy Ahrens has received additional funding to continue a NSF Computer Science, Engineering and Math Scholarship grant. Over a four-year period she has received a total of \$495,500. This year twenty business and faculty mentors are supporting forty scholarship recipients. Caroline Best, Meg Moss and Jackie Vogel received grants to attend the Appalachian Collaborative Center for Learning Assessment and Instruction in Mathematics (ACCLAIM) workshop on mathematics teacher preparation in Lexington, KY on August 16-17, 2002. Dr. JoAnne Thomasson and Bob Pesut have published the second edition of their developmental math textbook, “Experiencing Introductory and Intermediate Algebra”. A record 110 area math educators attended the winter meeting of the Smoky Mountain Mathematics Educators Association (SMMEA) hosted by Pellissippi State. Mathematics department faculty organized the event and conducted workshops designed to give K-14 teachers practical math activities to use in their own classrooms. In April



## Georgia Institute of Technology

**Programs:** The School of Mathematics has strong research efforts in Discrete Mathematics, Dynamical Systems, Functional Analysis, Mathematical Physics, Geometry/Topology, Numerical Analysis, Ordinary and Partial Differential Equations, Probability, Statistics, and Wavelets.

**NSF VIGRE Traineeships:** These five-year traineeships have a 12 month stipend of \$19,800, with a total of 30 months of non-teaching support. VIGRE recipients are also eligible for President's Fellowships.

**Information:** Call (404) 894-9203, or visit our website at <http://www.math.gatech.edu/>, or send an email to: [grad-coordinator@math.gatech.edu](mailto:grad-coordinator@math.gatech.edu). Write: Graduate Coordinator, School of Mathematics, Georgia Institute of Technology, Atlanta, Georgia 30332-0160.

**Georgia Tech offers Ph.D. programs in Mathematics and in Algorithms, Combinatorics and Optimization, and M.S. programs in Applied Mathematics, Statistics, Bioinformatics, and Quantitative and Computational Finance.**

**Fellowships:** The School of Mathematics offers both Teaching and Research Assistantships at academic year stipends of \$11,160 for M.S. students and \$14,040 for Ph.D. students. Summer support is generally available for doctoral students, and assistants pay only \$438 per semester. In addition, Georgia Tech offers President's Fellowships and President's Minority Fellowships to outstanding students. These currently provide an additional stipend of \$5,500 per year and are renewable for four years.

The **Center for Dynamical Systems and Non-linear Studies** and the **Southeast Applied Analysis Center** are associated with the School.

another attendance record was broken when 479 middle school students from 16 schools participated in the department's second annual Middle School Math Bowl. (Submitted by Catherine Williams)

#### **Presbyterian College (Clinton, SC)**

Nancy Fordyce has joined our department for the 2002-2003 academic year. Brian Beasley has been promoted to Professor and named the Charles E. Daniel Professor of Mathematics. Greg Goeckel is planning to be on sabbatical next spring and is directing Emmy Smith in her honors research this fall. Our MAA Student Chapter is active this year, with President Beth Cook already making plans for the Sixth Annual Mathematics Competition next spring. Katherine Johnson, a senior math major, has been awarded the South Carolina Council of Teachers of Mathematics Scholarship, in preparation for her student teaching next spring. (Submitted by Greg Goeckel)

#### **Southern Polytechnic State University (Marietta, GA)**

The Mathematics Department at Southern Tech had many comings and (sadly) goings. Professors Kathleen Hall, Simon Stricklen, Ahmad Abu Said and Sandy Wiener retired this year. Professors Hall and Stricklen were awarded emeritus status. The Department also welcomed Benjamin Torres as Instructor. Shangrong Deng is enjoying a Professional Development grant at Georgia Tech. Professors Meg Dillon and John Ziegler were deservedly promoted to full professor rank. Professor Ziegler presented these papers: "Maple Illustrations of Iterated Integrals," at the Joint Southeastern Sectional Mathematical Association of America / Southeast Regional American Mathematical Society Meeting in Atlanta; the invited paper, "Maple Illustrations of Key Topics from Vector and Multivariable Calculus", to the 14th International Conference on Technology in Colligate Mathematics meeting in Baltimore in November 2002. (Submitted by Barry Flannery)

#### **Tennessee Technological University (Cookeville, Tennessee)**

Annie Selden was selected to receive the Association for Women in Mathematics 12th Annual Louise Hay Award for Contributions to Mathematics Education at the January 2002 Prizes and Awards Session at the Joint Annual Mathematics Meetings in San Diego. For details, see <http://www.awm-math.org/hayaward/2002.html>. This award included an invitation to present the AWM-MAA Invited Address, titled "Two Research Traditions Separated by a Common Subject: Mathematics and Mathematics Education," at MathFest in Vermont in August 2002. For details, see the TTU Math Dept Technical Report with the same title at <http://www.math.tntech.edu/techreports/techreports.html>. While at MathFest, Dr. Selden and her husband, Dr. John Selden, were interviewed on Dr. Pat Kenschaft's Math Medley radio show on KFNX with Mike Breen, formerly of TTU's Math. Dept. and now AMS Public Awareness Officer, serving as guest host. Dr. Selden has also been appointed an Editor of the CBMS volumes, Research in Collegiate Mathematics Education, to serve until 2009. For

information on the editorial policy, see

[http://www.cbmsweb.org/Issues/rcme\\_policy.htm](http://www.cbmsweb.org/Issues/rcme_policy.htm).

While on a Fulbright grant in Cameroon, Dr. Andrzej Gutek spent several weeks traveling through the Western Cameroon researching the meaning of patterns found there. When used on a cloth these patterns may describe the position and wealth of the wearer. Some represent numbers, both finite and infinite. He plans to study these patterns, learn their meanings, and mathematical relationships.

Two people have retired: S. B. Khleif retired May 2002 and Mrs. Frances Crawford retired May 2002. Mrs. Patsy Peavyhouse, Secretary II, resigned August 30, 2002, to take a position with another organization. We are currently engaged in the search process to refill this vacancy. Dr. Michael Allen was awarded tenure, effective fall semester 2002. Dr. Ramesh Garimella was promoted from Associate to Full Professor, effective fall 2002. Dr. David Smith, Dr. Motoya Machida and Dr. Sabine Le Borne were hired to fill tenure-track Assistant Professor positions, effective fall 2002. Dr. Wendy Smith, Visiting Assistant Professor and Mrs. Shelly Forgey were hired to fill one-year temporary positions, effective fall 2002.

This past April, Drs. Michael Allen, Alexander Shibakov and Richard Le Borne with other faculty in the College of Arts and Sciences received a grant from the Sloan Foundation and the Council of Graduate Schools to implement a survey on the feasibility of a new Masters program in Mathematics and Science. This new Masters would be interdisciplinary in nature and would be tailored to fit the needs of professionals looking to further their education without going for a Ph.D.

From May 20 through 25, 2002, the Department hosted the '6th International Conference on Clifford Algebras and their Applications in Mathematical Physics' . The conference was preceded by a twoday Lecture Series on May 18 and 19 aimed at graduate students and newcomers to the field. It was co-sponsored by the American Mathematical Society and by the International Society for Analysis, its Applications and Computation (ISAAC). Professor Steven Krantz (Washington University) represented AMS on the Scientific Committee. Financial assistance was provided by the National Science Foundation, the College of Arts and Sciences, the Center for Manufacturing Research, and the Provost Office at Tennessee Tech; the Graduate School at the University of Arkansas in Fayetteville, and the College of Arts and Sciences at George Mason University. The 6th Conference was a continuation of a sixteen year old sequence of international conferences devoted to the mathematical aspects of Clifford algebras and their varied applications in mathematical physics, cybernetics, robotics, image processing and engineering. Approximately 170 participants, many of whom were graduate students and post-docs, attended both events. The conference was organized by Dr. Rafal Ablamowicz (Tennessee Tech) and Dr. John Ryan (University of Arkansas) with strong support of Tennessee Tech mathematics faculty, staff, and graduate students. Some of the talks will appear in an invited volume while the Lecture Series will appear in a form of a book. Both



publications are expected in 2003. For more information please visit <http://math.tntech.edu/rafal/cookeville/cookeville.html>. The next conference will be held in Toulouse, France, in the year 2005.. (Submitted by Rafal Ablamowicz)

#### **Union University** (Jackson, TN)

Jan Wilms, formerly department chair, has been promoted to Associate Dean of the College of Arts and Sciences. Bryan Dawson is the new chair. Terry Evans, a visiting assistant professor of computer science, has recently been diagnosed with lung cancer; his prognosis is not good. We solicit prayers on his behalf. Our students have now won top prizes for paper presentations at regional or national Kappa Mu Epsilon conventions four of the past five years. (Submitted by Bryan Dawson)

#### **University of Georgia** (Athens, GA)

New faculty at Georgia this year are: Matt Baker (Number Theory), Akos Magyar (Harmonic Analysis) and Dan Nakano (Algebra) We' re also lucky to have several talented Postdocs this year: Aaron Abrams (Topology), Ivan Cheltsov (Algebraic Geometry), David Hemmer (Algebra), Jo Hoffacker (ODE' s), Markus Hunziker (Representation Theory), Jihun Park (Algebraic Geometry), Bill Rulla (Algebraic Geometry), Jim Solazzo (Operator Theory), Csilla Tamas (Algebraic Geometry) and Nancy Wrinkle (Geometry) We' ve lost two more faculty to retirement this year: Jon Carlson and Red Alford. The VIGRE program is going strong at UGA. In addition to supporting several of our Postdocs and graduate students, VIGRE has also supported four summer REU' s (Research Experience for Undergraduates): The fourbody problem (Malcolm Adams, Summer 2001), Algebraic Curves (Elham Izadi, Summer 2001), Green' s Conjecture (Bill Rulla, Summer 2002), Time Scales (Jo Hoffacker, Summer 2002). Two more REU' s are planned for summer 2003. For more information on this and other VIGRE activities, visit [www.math.uga.edu](http://www.math.uga.edu), and click on VIGRE. Elsewhere on that website, you' ll find information on other upcoming activities, such as: 9th annual Cantrell lectures, featuring Joan Birman, Spring 2003, UGA High School Math Tournament, October 2002, Georgia Topology Conference, Summer 2003. (Submitted by Mo Hendon)

#### **University of North Alabama** (Florence, AL)

Dr. Oscar Beck, Chair of the Department of Mathematics and Computer Science and Professor of Mathematics, retired August 1, 2002. Dr. Beck joined our faculty in 1971. His service as Department chair began in 1990. Ms. Jean Henderson, Assistant Professor of Mathematics, is on leave this academic year to pursue a doctorate in Computer Science Education. Dr. Cynthia Stenger recently joined our faculty as an Associate Professor of Mathematics. She is a charter member of the SIGMAA on Research in Undergraduate Mathematics Education (RUME). Dr. Stenger' s presentation at the RUME 2002 conference, in Burlington, VT, was titled, "A Characterization

of Differentiating Mathematical Thinking Skills and Views in Immature Undergraduates Before and After a Cooperative Research Project". At Mathfest 2002, also in Burlington, Dr. Stenger presented results from her research titled "Improving Mathematical Thinking in Undergraduates Through Involvement in a Cooperative Research Project". Mr. Joel Fu recently joined our faculty as an Instructor in Computer Science. He is currently pursuing a Ph.D. in Computer Science at the University of Alabama in Huntsville. He has MS degrees in both Computer Science and Physics from Alabama A & M University and a BS degree from Anhui Normal University, a university located in mainland China. He fills a vacancy in Computer Science created by Dr. Oscar Beck's retirement and Ms. Henderson's leave of absence. Dr. H. David Muse, Professor of Mathematics, has been appointed to serve as Interim Chair for two years. He joined the faculty in 1986. Dr. Muse is a University of Kentucky graduate. (Submitted by David Muse)

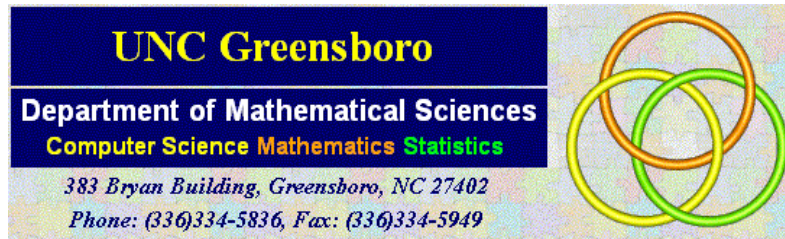
#### **University of North Carolina at Asheville (Asheville, NC)**

Last year the department hired two new assistant professors: Greg Boudreaux (Ph.D., University of Louisiana - Lafayette) and Mark MacLean (Ph.D., University of Wisconsin - Madison). In other personnel news, Dave Peifer assumed the reins of chair, and Mark McClure was granted tenure. In August, Pat McClellan was appointed as the new director of the Center for Teaching and Learning at UNCA. UNCA hosted the Midwest Dynamical Systems Conference in April of this year. The conference spanned three days, featured nine speakers, and attracted over fifty participants. Also in April, Robert Devaney of Boston University delivered our first annual Parsons' Lecture. The goal of the Parson's Lecture is to find wellknown mathematicians who can explain their field to a general audience. The lecture is made possible by an endowment from an alumnus in honor of former UNCA mathematics professor Joe Parsons. (Submitted by Mark MacLean)

#### **University of North Carolina at Greensboro (Greensboro, NC)**

Dr. Igor Erovenko is a new assistant professor in Mathematics, his areas of special interest are combinatorial properties of linear groups and bounded generation of  $s$ -arithmetic groups. New part-time faculty include Mrs. Lydia Fritz, lecturer in Computer Science and Mathematics, Dr. Vinaya Kelkar, lecturer in Statistics, and Mrs. Carol Iglesia, lecturer in Mathematics. Dr. David Herr (Statistics) and Mrs. Ginger Sallez (Mathematics) have retired. Dr. David Ludwig (Statistics) is now Professor of Pediatrics, Department of Pediatrics, Medical College of Georgia. Dr. Ludwig is working as the consulting statistician with clinical physicians and researchers in preventative medicine for children. He also holds a joint appointment in Biostatistics and Bioinformatics in which he will be teaching. Francine Blanchet-Sadri (Computer Science) was promoted to Professor. Dr. Fred Sadri will be on research leave spring semester 2003.

Dr. Jerry Vaughan was invited to lecture at the international mathematics conference "Topology in Matsue" organized by the Mathematical



**DEGREES:** The Department of Mathematical Sciences offers graduate programs of study leading to the **Master of Arts Degree in Mathematics**, and the **Master of Science in Computer Science**. The M.A. degree in mathematics offers three concentrations: **I. Applied Mathematics (30-33 hour program)**, **II. Applied Statistics (35 hour program)**, and **III. Pure Mathematics (30-33 hour program)**. Concentrations **I** and **III** allow the option of writing a thesis under the direction of a member of the graduate faculty, or passing a comprehensive examination on selected course work. The M.S. degree in Computer Science (30 hour program) offers the options of a thesis, a work related project, or a comprehensive examination.

**FINANCIAL:** Through the Graduate School, the department offers assistantships whose stipends range up to \$7500 for a maximum of 20 hours/week. Duties include supervised classroom teaching or tutoring in the department's tutoring labs. Regular in-state graduate students taking 6 semester hours currently pay total tuition and fees of about \$800 per semester. For non-residents of North Carolina, there is the possibility of a tuition waiver that reduces out of state tuition to the in-state tuition level. In addition, the department has several scholarships for graduate students that pay up to \$2500.

**FACULTY:** The members of the graduate faculty are well established in active research in many areas of mathematical sciences. Some are involved with consulting with government and industry, journal editing, and in positions of leadership in professional societies. Areas of research include combinatorics, dynamics, topology, linear models, mathematical statistics, biostatistics, number theory, image processing, computer algorithms, statistical modeling of physiological systems, database systems, algebraic number theory, theoretical computer science, symbolic logic, complexity theory, differential equations and control theory. For more information, please contact the Director of Graduate Studies, Department of Mathematical Sciences, P.O. Box 26170, UNCG, Greensboro North Carolina 27402, phone (336) 334-5836, or see our home page:

<http://www.uncg.edu/mat>

Society of Japan and Shimane University. The conference, which was held jointly with the Second Japan-Mexico Topology Symposium, took place at Shimane University in Matsue City, Japan, on June 24-28, 2002. The title of the talk was "Two step iteration of almost disjoint families." Dr. Vaughan will be on research leave Spring semester 2003 to work with Professor Alan Dow (UNCC) on the Scarborough-Stone problem which asks: is every product of sequentially compact spaces countably compact? For Hausdorff spaces, Dr. Peter Nyikos (USC) and Dr. Vaughan proved the answer is "no", and for hereditarily normal spaces, work by Dr. Vaughan, Dr. Nyikos, and others showed the answer to be consistent with and independent of the usual axioms of set theory. Dr. Dow and Dr. Vaughan will work on the remaining (and most important) case of completely regular spaces. (Submitted by Linda Kilgariff)

#### **University of North Carolina at Wilmington (Wilmington, NC)**

A new BS degree in Statistics has begun enrolling students in the Fall of 2002. The Statistics Consulting Center has officially opened in the Department of Mathematics and Statistics to provide statistical advice to faculty and students at UNCW. The Department of Mathematics and Statistics at UNCW hosted the Fourth International Conference on Dynamical Systems on May 24-27, 2002. The two-volume proceedings of the conference, edited by Drs. Wei Feng and Xin Lu, will be published in early 2003. New Assistant Professors in 2002: David Rolls (Ph.D. in mathematics, 2002, from Queens University) and Susan Simmons (Ph.D. in statistics, 2002, from University of South Carolina) Dr. Thaddeus Dankel retired in the Spring of 2001, after thirty years of service to the Department of Mathematics and Statistics. Ms. Patricia Joseph retired, she was secretary in the Department of Mathematics and Statistics since 1971. (Submitted by Dargan Frierson)

#### **University of South Alabama (Mobile., AL)**

We are pleased to welcome new members to our department. In the Fall of the 2002-2003 academic year, two new faculty members were hired: Dr. Elena Galaktionova, Assistant Professor, and Dr. Nutan S. Mishra, Assistant Professor, who holds a one-year appointment. Elena received her Ph.D. degree from the University of Massachusetts. Nutan earned her Master of Science in Computer Science from the University of South Alabama and her Ph.D. degree from the University of Indore. We will be hiring six new faculty members this year. Professor Scott Carter is serving as interim chair this year. Ms. Ameina Summerlin is continuing as an Instructor for the 2002-2003 academic year. Ms. Sonna Cranford, Instructor, was rehired in her one-year appointment for the 2002-2003 academic year. Dr. Frank Jellett's teaching appointment as a Professorial Lecturer is a continuing appointment. After serving one year Professor Dan Flath stepped down as chairman of our department in order to take a position of Visiting Professor at Macalester College. Dr. John Cruthirds has accepted a position as Chair of the Department of Mathematics and Computer Science at North Georgia College & State University. Dr. Igor Mineyev is now an Assistant Professor of

Mathematics at the University of Illinois at Urbana-Champaign. Dr. Igor Mineyev received a five-year NSF CAREER grant to study some questions related to geometric group theory, in particular, hyperbolic groups. Dr. Jose Barrionuevo accepted a position as an Associate Professor of Mathematics at Universidade Federal do Rio Grande do Sul. Dr. Dulal Bhaumik is now at the University of Illinois at Chicago. Dr. Pandu Kulkarni left the department for a position at Eli Lilly in Indianapolis. We wish them well on their further endeavors. Dr. Fred Dodd retired from the University after thirty five very productive years of service. We miss him and hope he will come back for many visits. Prof. Madhuri Mulekar is currently on sabbatical leave at the University of Georgia. Dr. Stephen Brick will go on sabbatical for the Spring of 2003. Professor Satya Mishra has been awarded the 2001 Jacob Wolfowitz Prize by the American Journal of Mathematical Management Sciences for Outstanding Theoretical Contribution in Statistics. We congratulate him on his award.

The members of our faculty are continuing to be involved in externally funded grant activities. Dr. Scott Carter is in the final year of a NSF grant to investigate quandle cohomology and invariants of knotted curves and surfaces. Dr. Suzanne McGill is a Co-PI for a three-year NSF Teacher Enhancement Grant. Dr. Al Rainosek is the PI for a U.S. Environmental Protection Grant titled "Natural Biogeochemical Tags of Striped Mullet, Mugil cephalus, Estuarine Nursery Areas in the North Central Gulf of Mexico". Drs. Dan Silver and Susan Williams have a three-year NSF grant to study algebraic dynamics of knots and links. Dr. Madhuri Mulekar is a Co-PI for a NSF grant titled "Computer science, engineering and mathematics research scholars". Drs. Scott Carter, Vasilii Prokhorov and Cornelius Pillen received a grant from the Alabama Space Grant Consortium to support the Mobile Mathematics Circle. The Mobile Circle is a free problem solving program offered to secondary students from Mobile County. The program meets weekly in the evening at the University of South Alabama. The students are instructed in a variety of problem-solving topics that they would not encounter in the usual high school mathematics curriculum, including the principle of the extreme, the pigeonhole principle, invariants and graphs. The department will host the Third Mobile Mathematics Olympiad in Spring 2003, rewarding and encouraging young students to study mathematics. (Submitted by Vasilii Prokhorov)

#### **University of South Carolina (Columbia, SC)**

On Friday, October 4, 2002, the Department of Mathematics hosted Homecoming 2002 for the College of Science and Mathematics. At this special event, Distinguished Professor Emeritus Thomas L. Markham was honored for his many years of service to the Department and the University with the establishment of a scholarship in his name for undergraduate majors in mathematics. At the presentation, Dr. Markham was presented with a plaque and a bound copy of his collected works. Due to generous contributions from his family, friends, colleagues, alumni of the Department, and Professor Markham, the scholarship has been endowed and will be awarded in Spring

UNIVERSITY  
OF  
SOUTH ALABAMA



MATHEMATICS  
AND  
STATISTICS

#### GRADUATE STUDIES IN MATHEMATICS

The Department of Mathematics and Statistics offers a modern and flexible program of study leading to a Master of Science degree in Mathematics. The course of study can be tailored to meet the needs of individual students. The program combines a basic graduate education in mathematics with options for concentrated study in various areas of the mathematical sciences including computer science and statistics. Depending upon the electives selected, the curriculum can be used as a preparation for a more advanced degree in the mathematical sciences, or a preparation for employment in industry, government, or education.

The Department is committed to quality instruction and research and to the recruitment of the best possible faculty. Graduate students have an opportunity to work closely with individual faculty members. Students are invited to attend regular colloquium talks by local and visiting faculty members.

Graduate assistantships are available on a competitive basis. In addition to a stipend they carry a tuition waiver.

For more complete information, including application forms, please write, call, or visit our website:

Graduate Coordinator  
Department of Mathematics & Statistics  
University of South Alabama  
Mobile, AL 36688-0002  
(251) 460-6264  
email: pillen@jaguar1.usouthal.edu  
<http://www.usouthalabama.edu/mathstat/>

2003. Approximately 100 colleagues, alumni, family and friends attended the presentation and the reception.

The department issued its first departmental newsletter, *The Abscissa*, this year. Through the Newsletter we will keep our alumni and friends of the department informed about past and upcoming events within the department, as well as news about our alumni. David Sumner served as the editor. On January 19, 2002, the USC Department of Mathematics hosted its 16th Annual High School Math Contest. We welcomed 230 students and their teachers from 34 of South Carolina's high schools. The contest consisted of a written exam - for which the first three finishers received scholarship support for attending the University of South Carolina, a ciphering competition (in which three-person teams from each school compete), and the top sixteen scorers from the written exam were then paired at random for a single elimination tournament. Further information about the contest including names of winners, old exam questions and solutions can be found on our contest website <http://www.math.sc.edu/contest/>. Our next contest is scheduled for Saturday February 1, 2003.

Our Putnam Team consisting of Jonathan Mason, Brandon Fornwalt, and James Whittingham ranked 111 this year. Undergraduates Chris Jones, Katie Spurrier, and Aseem Sood took part in the 18th annual Mathematical Contest in Modeling sponsored by the Consortium for Mathematics and its Applications (COMAP) and got an honorable mention for their solution. Undergraduates Jonathan Mason and Brooks Willet are studying abroad this semester but will return in the spring. Jonathan is with the Budapest Semesters program and Brooks is studying in Russia. James Whittingham is in Washington, DC participating in the Washington Semester Program. The number of our majors has been increasing in recent years; the latest count is over 200.

Professors Colin Bennett and Pencho Petrushev will be on leave in the fall and spring respectively, and Professor Laszlo Szekely is a visiting Fellow at the National Center for Biotechnology Information. Maria Girardi returned to our department after spending the previous academic year in Karlsruhe, Germany as part of a Humboldt fellowship. Professor Jerry Griggs spent eight weeks at the "SCAMP" summer program at the Institute for Defense Analyses, Center for Communications Research, in La Jolla working on mathematics problems related to national security. Jerry will also give a plenary address at the Australian Conference on Combinatorial Math and Combinatorial Computing in December in Newcastle Australia. David Sumner won the Michael J. Hill award for outstanding teaching from the South Carolina Honor's College. Susanne Brenner is our new assistant chair, replacing George Johnson in that capacity. We were saddened to learn of Dr. Marguerite Hedberg's passing at the age of 94. Dr. Hedberg received her Ph.D. from the University of Missouri in 1932 and was an Associate Professor in our department until her retirement in 1976. Visitors to our department include Amos Ron, Coordinator of the Wavelet IDR Center at the University of Wisconsin, and Lutz Weis, on sabbatical from the Mathematisches Institut I,

**MISSISSIPPI STATE UNIVERSITY  
GRADUATE PROGRAMS IN MATHEMATICS AND STATISTICS**

**Programs:** The Department of Mathematics and Statistics offers Master' s degrees in Mathematics and Statistics, and the Ph.D. degree in Mathematical Sciences. The doctoral program is designed to ensure that the student acquires knowledge in a broad spectrum of the mathematical sciences, in addition to expertise in a chosen field of concentration. The areas of concentration are applied and computational mathematics, differential equations, functional analysis, and operator theory. The degree program for the M.S. in Mathematics is flexible enough to allow the student to prepare for employment or further graduate study. The M.S. in Statistics program is a blend of statistical theory and statistical methods, which provides the student with excellent training for professional employment in government or industry. Students in this program obtain sufficient theoretical background to qualify to teach elementary statistics or to enter a doctoral program in statistics.

**Financial Support:** Financial assistance is available on a competitive basis to qualified applicants. Graduate Teaching Assistantships are available for a nine-month period with stipends starting at \$14,000 for doctoral students and \$10,000 for master' s students. There is the possibility of summer support. There is also a possibility of Fellowships at \$18,000 for U.S. citizens or permanent residents. All Graduate Teaching Assistants and Fellows receive a full tuition waiver. Screening of applicants for Fall begins in February, while screening for Spring starts in October.

**The University:** Mississippi State University is a Land-Grant Institution with a Carnegie classification of Doctoral/research university-extensive. It has an enrollment of over 16,000, including more than 3,000 graduate students. The University is located in northeast Mississippi adjacent to the city of Starkville and the Mississippi Research and Technology Park. Mitchell Memorial Library, located close to the Department, has extensive holdings in the mathematical sciences, and maintains a subscription list of more than 150 mathematical and statistical journals.

**The Department:** Currently, the Department has thirty-seven faculty members, including twenty-one graduate faculty, approximately fifty undergraduate majors, and about fifty full-time graduate students. The Department' s faculty is active in research and publication. Computing resources include a departmental computer laboratory, a computer classroom, and personal computers in all offices. All computers are higher-end, networked, and loaded with the latest versions of commonly used software packages in mathematics and statistics. The Department provides collaborative support for projects funded through the Engineering Research Center (ERC). Students in certain research areas may obtain access to high performance super-computers and Silicon Graphics workstations at the ERC.

**Correspondence:** For further information and application forms, contact: The Graduate Coordinator, Department of Mathematics and Statistics, P.O. Drawer MA, Mississippi State, MS 39762; Telephone: (662) 325-3414; Fax: (662) 325-0005; e-mail: [Office@math.msstate.edu](mailto:Office@math.msstate.edu); URL: <http://www.msstate.edu/dept/math>.

Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status.



Universität Karlsruhe, Germany. Dr. Cornelia Kaiser a German citizen, will visit as an Alexander von Humboldt Feodor Lynen Research Fellow. Dr. Scott Young recently received his Ph.D. from the University of North Carolina, and will also visit as a post-doc. Professor Lenny Jones from Shippensburg University and Professor Eva Matouskova is from the Mathematical Institute, Czech Republic visited our department in the Spring of 2002. Details about these items and other news of our department is available from our departmental WEB page at <http://www.math.sc.edu/>. (Submitted by David Sumner)

#### **University of South Carolina at Beaufort (Beaufort, SC)**

The University of South Carolina Beaufort is now a baccalaureate degree-granting institution. The University of South Carolina Board of Trustees and South Carolina Commission on Higher Education approved our status as a four-year institution this year. Dr. Jane Upshaw, Dean of USCB and soon to be Chancellor Upshaw, is a long time faculty member in the mathematics department. Dr. Ron Harshbarger was named the University of South Carolina Trustees' Professor of the Year and received the Award for Distinguished College or University Teaching of Mathematics from the Southeastern Section of MAA. He is currently working on five new textbooks with Addison Wesley Publication Company and one new text with Houghton Mifflin Publishing Company. We are currently searching for a tenure track replacement for Dr. Bonnie Lawrence who left us for Marshall University. (Submitted by Ron Tuttle)

#### **University of South Carolina at Spartanburg (Spartanburg, SC)**

Brooks/Cole published Seyed Roosta's second book in August 2002. The title of his book is Foundations of Programming Languages: Design and Implementation. Professor Roosta also obtained \$350,000 grant of equipment from the Staubli Corporation for a robotics lab. The Staubli Corporation and the University jointly use the robotics lab for teaching and for research. Jasmin Chadha, a computer science graduate of Southern Polytechnic State University, and Jamie Spratt, a mathematics graduate of Western Carolina University, joined the USCS faculty this fall. Dr. M.B. Ulmer is serving as the acting Dean of the College of Arts and Sciences. Dr. Celia L. Adair is past president of the South Carolina Council of Teachers of Mathematics.

The Division of Mathematics and Computer Science in collaboration with the USCS School of Education, received funding of approximately \$62,000 for the project Bridges to Success in Mathematics through the Eisenhower Professional Development Program in Science & Mathematics. This project promotes universal access to high standards of learning, provides support for all students to reach those standards, and creates bridges between mathematics teachers in grades 6-8 and in post-secondary institutions that will facilitate effective implementation of the South Carolina Mathematics Curriculum Standards. Specifically, the three project goals are: 1. provide professional development in mathematics content and pedagogy for teachers in grades 6-8 through workshops in content areas identified by National Council

of Teachers of Mathematics (NCTM 2000) standards; 2. increase collaboration between teachers of grades 6-8 and post-secondary mathematics teachers through a faculty mentoring program; and 3. raise the level of awareness of teachers of grades 6-8 of strategies for working with underrepresented groups (students diverse in culture and learning style). Submitted by Charles Stavelly)

#### **University of the South (Sewanee, TN)**

Hardy Grant, of York University in Toronto, helped us get off to a good start in this academic year by giving a University Lecture on the history of the liberal-arts tradition. Professor Grant described the large and crucial role that mathematics has played in the rise of liberal education. A few weeks later, Nick Bennett, class of '91, gave a talk on his work at SchlumbergerDoll, where he is incorporating wavelet techniques with Bayesian probability to aid drillers in search of oil. The Annual Homecoming Lecture will be given by Matt Cathey, class of '98, on circle packing and its relation to conformal mapping and to current ideas about brain-mapping. In January, Catherine Cavagnaro will replace Laurence Alvarez as chair of the Department of Mathematics and Computer Science. This spring it is Sewanee's turn to host the Sewanee-Rhodes-Hendrix Undergraduate Mathematics Symposium, an annual event that began some twenty-five years ago. This year's Sherwood Ebey Lecture will be given at the symposium by Anant Godbole. We are greatly saddened to report the recent death, following a long illness, of our longtime colleague, Stephen Puckette. Steve gave two invited addresses to the Southeastern Section and will be remembered fondly by many of its members. (Submitted by William Priestley)

#### **The University of Tennessee at Chattanooga (Chattanooga, TN)**

The UTC Mathematics Department is pleased to have two new tenure-track Assistant Professors: Dr. Sharon Brueggeman, Ph.D. in number theory from the University of Illinois at Urbana-Champaign, comes to us from Ohio State University where she had a Ross Assistant Professor-ship and Dr. Marc Loizeaux, Ph. D. in statistics from Florida state University, comes to us from a Research Assistantship at FSU. The department has received a generous endowment of over \$300,000 from the estate of Dr. Marjorie Watson. Dr Watson was an honors graduate and former faculty member at this institution; she earned her Ph.D. in mathematics at the University of Wisconsin, was head of the Mathematics Department at Huntingdon College (AL), taught at the University of Tennessee Knoxville, and worked in research and development at Westinghouse, Sperry Rand, and TVA. The Mathematics Department will use these funds for a variety of department needs including student scholarships. Professor Boris Belinskiy earned the Outstanding Research Award in the College of Arts and Sciences for 2001-2002. Professors Terry Walters and Stephen Kuhn were awarded a three year NSF CCLI (Course, Curriculum, and Laboratory Improvement) grant to improve the student success in several first year courses by adapting the on-line WHS (Web-based Homework System) project at the University of Kentucky and to



Master of Science in Mathematics  
with concentrations in

Applied Mathematics, Computer Science, and Statistics

**The Graduate Program:** The M.S. degree in Mathematics provides a broad overview of applied mathematics, computer science, and statistics, as well as more in depth study in one area. The program of study consists of core courses in numerical analysis, operations research, discrete simulation, and statistics, electives in the field of concentration, and a research project. Students are prepared for careers in industry, teaching careers at the post-secondary level, and doctoral study.

**The Faculty:** Faculty members are noted for teaching excellence. Their research interests include approximation theory, differential equations, fuzzy logic, mathematical biology, mathematical modeling, numerical analysis, parallel computing, pattern recognition, signal and image processing, and quality control.

**Financial Assistance:** Georgia Southern University provides a wide range of financial assistance opportunities for eligible graduate students. Several graduate assistantships, which provide a stipend and reduced tuition, will be available for Fall 2003. Duties include grading and assisting in computer laboratories (15 hours/week).

**Requirements for Regular Admission:**

- 1) a bachelor' s degree in a mathematical, science, or engineering discipline,
- 2) the Graduate Record Examinations (GRE) scores,
- 3) courses in calculus, probability, and linear algebra; the applied mathematics concentration also requires ordinary differential equations and introductory analysis; the computer science concentration also requires data structures and computer organization and architecture.
- 4) demonstrated proficiency in a computing language.

**For Further Information:**

Graduate Director, Department of Mathematics and Computer Science  
Georgia Southern University, Statesboro, GA 30460-8093  
(912)681-5390

[msmath@gsu.cs.gasou.edu](mailto:msmath@gsu.cs.gasou.edu)

<http://www.cs.gasou.edu> or <http://www2.gasou.edu/gradcoll>

provide prospective teachers training to use web-based tools effectively in preparation for teaching. (Submitted by Steve Kuhn)

**The University of Tennessee at Martin** (Martin, TN)

The Department of Mathematics and Statistics at the University of Tennessee at Martin welcomed two new Assistant Professors this fall: Matthew Harvey, B.S.-Virginia, Ph. D.-John Hopkins University, and James Borkowski, B.S.-University of Houston, Ph.D. candidate-University of Tennessee. Professor Sue Boren retired at the end of the spring semester of 2002. She remains active in the profession having just finished serving as program chair for a regional NCTM meeting at Paducah, Ky, Oct, 10-12, 2002. Associate Professor Stephanie Tyler Kolitsch received the Coffey Award for Outstanding Teaching from the University of Tennessee in the spring of 2002. This award was established by UT trustee Charlie Coffey and his wife Mai to recognize a faculty member who has demonstrated strength in teaching and contributed to the teaching profession through extracurricular achievements, leadership, and scholarship. Professor Chris Caldwell was recognized as the University Scholar for the fall semester of 2002 for his research and publications in the area of number theory and primes. The Mathematical Association of America has accepted Assistant Professor Desiree McCullough into the 2002 class of Project NExT. (Submitted by Bill Austin)

**Wake Forest University** (Winston-Salem, NC)

James Norris has been promoted to Professor and will be on a research leave during the spring semester of 2003. Jerrold E. Marsden, Professor of Control and Dynamical Systems at Caltech, will deliver the 2002-3 Gentry Lectures on March 24-25, 2003. Two Wake Forest University teams received the "outstanding" designation in last spring's COMAP competition. One team also won an award for the best paper from the Institute for Operations Research and the Management Sciences (INFORMS). (Submitted by Ellen Kirkman)

**Western Carolina University** (Cullowhee, NC)

This year we welcome three new faculty members to our department. Sloan Despeaux is an Assistant Professor of Mathematics. She received her Ph.D. from the University of Virginia and is a Project NExT fellow. Erin McNelis is also an Assistant Professor of Mathematics. She received her Ph.D. from Clemson University. Barry Wilkinson is an Associate Professor of Computer Science. He received his Ph.D. from the University of Manchester and comes to us from the University of North Carolina at Charlotte. Kathy Ivey is our new department head, and she also won the UNC Board of Governors teaching award this year. Ralph DeVane and Mike Dolan have begun phased retirement. Julie Barnes received tenure and was promoted to Associate Professor. We will be sponsoring two high school contests. The annual WCU Mathematics Contest on April 10, 2003, and the annual Computer Science Contest on April 8, 2003. (Submitted by Julie Barnes)