

# Department of Mathematics and Computer Science Newsletter



*An In-House Publication for Faculty and Staff in Georgia Southern's Department of Mathematics and Computer Science*

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Editor: Mary Margaret Hoy

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## Announcements

The Ninth Annual GSU Math Tournament held Saturday, February 22, was another huge success. Thanks, and CONGRATULATIONS, to **Brenda Carter** and the Math Tournament Committee for another job well done. Members of the committee are Brenda Carter (Chair), **Rosalie Abraham, Sharon Barrs, Lydia Bragg, Lori Braselton, Don Brown, Wendy Habegger, Deloris Hodges, Mary Margaret Hoy, Susan McKinnon, Janet O'Brien, Donna Saye, Gerald Shoultz, Bobby Sparks, and Lisa Yocco.** Thanks also to other members of the Math/CSC Faculty who assisted with the tournament. This is an excellent departmental project. A total of 771 students participated in the event. The list of winners will be put in faculty mailboxes soon.

Foundation Grant proposals are due

to **Lila Roberts** by 5 p.m. on April 2. Guidelines and application forms are available from **Sharon Lanier.**

While at the national Teachers Teaching with Technology meeting, **Sharon Taylor** recruited speakers for our regional meeting and met with the Texas Instruments people (who gave us the grant). She became very thankful that GSU is not hosting a conference for 2200 people since 200-300 should be enough to handle. The T<sup>3</sup> Program Committee will meet March 4 at 2:00 in her office.

## Professional Activities

**Martha Abell** attended the Georgia Tech Faculty Development Program Workshop held February 20-21.

**Sharon Barrs, Debbie Evans,**

**Cynthia Sikes, Debbye Stapleton, and Jim Vargo** participated in another Wetland Wonders workshop for middle-grades teachers. On February 1, the teachers returned to GSU with data collected from their local wetlands. Debbie, Cynthia and Debbye held a session on modeling their data and interpreting the results. Sharon held a session on educational internet resources. The teachers also met with a representative from the Adopt-A-Stream program. Wetlands Wonders is an interdisciplinary project on campus and is sponsored by the Eisenhower program. The group recently received news that the grant for Wetland Wonders has been renewed for another year.

**Rose Mae Bogan** presented "Biomedical Alcohol Absorption and the Risk of Having an Accident" for the student chapter of MAA on February 20, 1997. The material for this speech was prepared by both

Rose Mae Bogan and **Mary Sikes**.

**Jane Cason** and **Lisa Yocco** will conduct a two-day workshop "Enhancing Algebra with the TI-82 Graphing Calculator" through the Department of Education Technology Training Center at First District RESA on March 4 and March 11.

**Debbie Evans, Patricia Hale, Cynthia Sikes,** and **Debbye Stapleton** attended the regional meeting of the National Council of Teachers of Mathematics held February 27 through March 1 in Atlanta, GA.

**Ellen Fischer** and **Bill Meisel** gave a presentation "Experiences Teaching Statistics with the TI Graphing Calculator" as part of the Statewide Seminar Innovation in Undergraduate Mathematics on February 4. It was well received. Ellen does have a videotape of the presentation if you wanted to attend but were unable to attend.

**Ellen Fischer** attended the national Teachers Teaching with Technology (T<sup>3</sup>) conference in Philadelphia, PA, from February 7-9. She learned some interesting ways of doing statistics with the TI-83 that are not

built into the calculator.

**Ellen Fischer** is part of a group working with Stilson Elementary School on their yearlong project on gender equity. Their latest efforts involve a walking tour of the school to identify gender friendly environments as well as a web page discussing the school's efforts to become a gender equity model.

**Cindy Gonzalez** and **Susan McKinnon** attended the national Teachers Teaching with Technology (T<sup>3</sup>) Conference in Philadelphia, PA, held February 6 - 9. They gave a presentation entitled, "Using the TI-92 to Teach Calculus Over a Distance Learning Network."

**Bruce McLean** has been acknowledged for making improvements to the recent text book, *Engineering Statistics: The Industrial Experience*. The authors are Ostle, Hicks, Turner, and McElrath. The book was published by Duxbury, an imprint of Wadsworth Publishing. Bruce used the preprint in teaching the graduate course Statistical Process Control.

**Donna Saye** gave a presentation on teaching trigonometry using the TI-

82, cooperative learning and student projects at the Teachers Teaching with Technology (T<sup>3</sup>) National Conference in Philadelphia, PA, during February 5-9.

**Arthur Sparks** represented the Department at the Winter Open House held Saturday morning, February 22, 1997. The Faculty Interaction Session was held 9:30 - 11:30. Prospective students and their families meet with various representatives and ask questions in their area(s) of interest. There was an excellent turnout for this event.

On February 18, 1997, **Arthur Sparks** attended a meeting of the Executive Committee of the Regents' Academic Committee on Mathematical Subjects. The meeting was held in Macon. Arthur is Chair of the ACMS this year.

**Arthur Sparks** is serving on the Honors Committee of Phi Kappa Phi again this year.

**Sharon Taylor** presented a two hour workshop, "An Extended Project for Precalculus or Statistics" at the Ninth Annual National Teachers Teaching with Technology (T<sup>3</sup>) Conference in Philadelphia, PA.

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## Departmental Committee Reports

### Search Committee

Members are **John Rafter**, Chair, **Mark Aulick**, **Jim Braselton**, **Charles Champ**, **Goran Lesaja**, **Xiezhang Li**, and **Donna Saye**.

We have received close to 320 applications for the three positions

for which we are conducting searches this year. The closing date for applications was February 18, 1997, and search committee members are now in the process of reviewing applicant folders. When we have completed our review, there will be a small group of finalists invited to visit campus. You should know that

no one is invited to campus until their references are closely checked through telephone calls and e-mail. It is important that as many of our faculty as possible meet the candidates who visit campus and subsequently participate in the decisions about who to hire. Please try to participate.

## Teaching Using Technology Committee

Submitted by **Martha Abell**

The Teaching Using Technology Committee met on February 25 to begin discussion on the possibility of adopting a single graphing calculator for use in all introductory mathematics courses (College Algebra, Pre-Calculus, Survey of Calculus, Intro. to Statistics I) beginning in Fall 1998. The committee made plans to discuss the topic with other departments affected by the decision. We also talked about possible solutions to the problem of students using graphing calculators to store formulas and other information during testing situations.

## MAA Student Chapter News

Submitted by **Martha Abell, Jim Braselton, and Lisa Norton**

We would like to thank two members of our department who have given presentations at chapter meetings this quarter. **Dale Gibson** spoke about "The Magic of Algebra" on January 20, and **Rose Mae Bogan** presented "Biomedical Alcohol Absorption and the Risk of Having an Accident" on February 20. Both talks were well-attended. (We are certain that the pizza had nothing to do with the increased attendance.) On March 6 at noon, **Charles Champ** will present "An Introduction to Interval

Computations." Everyone is welcome to attend. If you would like to give a presentation at a chapter meeting during Spring Quarter, please let us know.

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## Personal News

**Mary Sikes'** daughter, Marianne, is to be married on April 5 in Raleigh, NC. Mary states, "It's been quite a feat trying to help coordinate plans long distance!"

**Mary Sikes'** son, Fess, left this week to move to Maui. She hopes she can visit him while he's there!

## Problem of the Month

Submitted by **Lila Roberts**

Which one of our senior faculty members was second runner up in a beauty contest at Southern Baptist College in 1967???

### Solution to Previous Problem of the Month

Submitted by **Charles Champ**

Let  $A$  be an  $n \times n$  nonsingular real matrix that has been partitioned as follows:

$$A = \begin{bmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \end{bmatrix}.$$

Express  $A^{-1}$  in terms of  $A_{11}$ ,  $A_{12}$ ,  $A_{21}$  and  $A_{22}$ . (Hint: The solution can be obtained by solving a system of matrix equations.)

Solution:

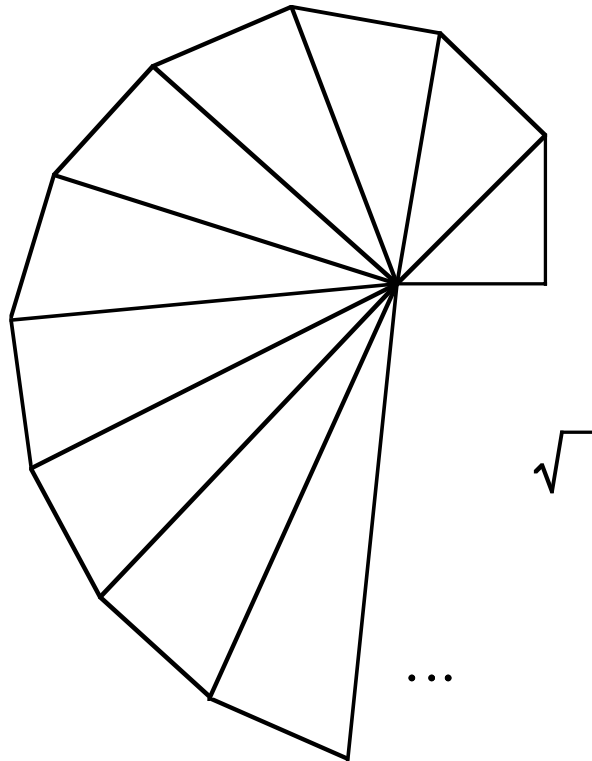
$$\begin{bmatrix} (A_{11} - A_{12}A_{22}^{-1}A_{21})^{-1} & -A_{11}^{-1}A_{12}(A_{22} - A_{21}A_{11}^{-1}A_{12})^{-1} \\ -A_{22}^{-1}A_{21}(A_{11} - A_{12}A_{22}^{-1}A_{21})^{-1} & (A_{22} - A_{21}A_{11}^{-1}A_{12})^{-1} \end{bmatrix}$$

## New Staff Member



**Judy Taylor** is the new part-time secretary for the Department of Mathematics and Computer Science. She currently works in Building 806 in the mornings and in the main office in MPP during part of the afternoon. She and her husband Steve, who is a minister at Middleground Primitive Baptist Church, have two children. Their son Brian is 16 years old, and their daughter Sarah is fourteen. Judy is originally from Lenoir City in east Tennessee. Most recently she lived in Lynchburg, TN where she worked at the Moore County Farm Bureau. Judy enjoys reading, crossword puzzles and cross-stitching.

## Integral Radical Distances



Rational, irrational, irrational, rational, . . .  
 We follow the roots of the God given ones.  
 As we view this shell from a mythical bay,  
 We can plot exactly where they lay.

Charles Champ



Happy  
 Birthday!



## March Birthdays

<b>David Heath</b>	05
<b>Pam Watkins</b>	06
<b>Deborah Boykin</b>	11
<b>Beth Hardy</b>	24
<b>Jim Vargo</b>	26
<b>Walter Lynch</b>	28



Happy  
 Birthday!

