

# 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*

Vol. 11, No. 3

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Printing/Circulation: Scott Street

November 1998

<http://www.cs.gasou.edu/newsletter/>

## Professional News

**Ahmed Barbour** and **Luke Olszewski** were invited by ALDEC Inc. to attend a one day Training Seminar using Active-VHDL, an integrated Windows NT/95 VHDL design entry and verification environment for mainstream FPGA/CPLD designers. Ahmed attended the October 1<sup>st</sup> session in Orlando, FL, and Luke attended the October 8<sup>th</sup> session in Huntsville, AL. The seminar consisted of VHDL Design Simulation and Implementation with an emphasis on Design Flow and Practical Exercises. ALDEC has provided Georgia Southern University with a 1 year license to sample this software package. Active-VHDL can be used with Xilinx Foundation Series Software to design and implement logic circuits using Field Programmable Logic Gates for Hardware and Software Co-design methodology.

**Eric Funasaki** and **Yingkang Hu** participated in the graduate student recruiting session held at Coastal Georgia Center in Savannah, Tuesday, October 27, 1998. They talked to prospective students and distributed materials

introducing our Master's program. The session was organized by the College of Graduate Studies.

**Cindy Gonzalez** was one of five presenters at the meeting of the Board of Regents in Atlanta on October 14, 1998. The focus of the meeting was to showcase projects that used innovative course design in the distance learning environment. Cindy represented Georgia Southern and spoke about the Calculus I course being offered via GSAMS that uses the TI-92 calculator/computer. After the meeting Cindy was notified that the President's Office would provide funds (\$3500) for the purchase of additional TI-92's so that the course might reach more students.

**Janet O'Brien, Donna Saye, and Gale A. Watson** attended the Georgia Council of Teachers of Mathematics Conference (GCTM) at Rock Eagle on October 15-17, 1998.

**Anne Pierce** presented the paper "Differences in Judgements of Computer

Ethical Behavior by Position, Education, and Years with Employer" at the SEInforms (Information Systems group) in Myrtle Beach, SC, on October 1, 1998.

**John Rafter** has published his book titled *Statistics With Mathematica* with **M.L. Abell** and **J.P. Braselton**, Academic Press, 1999.

**Arthur Sparks** received an equipment grant from Texas Instruments, Inc. at the beginning of Fall Semester, 1998. The equipment included 10 Graph Links, 25 TI-83 graphing calculators, 9 TI-83 Viewscreen Calculators, and 23 TI-83 Viewscreen Packages. The equipment is valued at \$16,175.00.

**Arthur Sparks** represented the Math/CSC Department at a two-day Georgia Southern University Recruiting Reception held October 21-22, 1998 in Atlanta at the Marriot at Perimeter Center. Prospective students and their families met with various representatives and asked questions in their area(s) of interest.

## Announcements

**Rose Mae Bogan** is the Associate Editor of the "Georgia Journal of Science".

**Scott Street** has been elected Faculty Secretary of Leadership GSU, a student organization seeking to become a circle of Omicron Delta Kappa (ODK) National Leadership Society.

The **Math/CSC Department** sponsored a **CSC Advisory Board Meeting and Luncheon** on Saturday, October 17, 1998 (Homecoming at GSU). The activities began at 9:00 AM with refreshments followed by a panel/discussion session and luncheon for Board members, CSC Faculty, and guests. Board members were provided tickets to the Homecoming Football game and were invited to the Math/CSC Alumni Reception after the game. CSC Advisory Board members in attendance were: Mr. William Cotton (Engelhart PCG),

Mr. Andy Ellis (Fisher-Rosemount Petroleum), Mr. Steve Sims (Lanier Worldwide, Inc.) and Mr. Mike Todd (Georgia Southern University).

**MAA News:** At the first MAA meeting on October 30, 1998, **Bill Meisel** presented, "An Analytical Solution of a Cubic Equation". If you or someone you know would like to give a presentation at a future meeting, please contact **Martha Abell**, **Jim Braselton**, or **Sharon Taylor**. Also, encourage your students to join the Student Chapter of MAA. Application forms are available in Martha Abell's office (MPP 3037).



## November Birthdays

John Davenport  
Debby Stapleton

1  
27



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**Solution to October Problem of the Month:** Solutin submitted by Charles Christmas: Combining terms, the numerator of the left factor is equal to  $x^4 - 10x^3 + 35x^2 - 50x + 24$ . Synthetic division will show that  $(x - 1)$ ,  $(x - 2)$ ,  $(x - 3)$  and  $(x - 4)$  are factors of this polynomial. Combining terms, the numerator of the left factor is equal to  $x^4 + 10x^3 - 35x^2 + 50x - 24$ . Synthetic division will show that  $(x - 1)$ ,  $(x - 2)$ ,  $(x - 3)$  and  $(x - 4)$  are factors of this polynomial. Thus, the product of the two factors is 1.

*Comments from Bill Meisel:* This problem came from Chrystal's delightful *TEXTBOOK OF ALGEBRA* (circa 1888). I submitted the problem because I wondered if there was some tricky way to recognize that the product was 1 without adding the five terms of each factor. In Chrystal's era, of course, no one would have blinked at doing so much manipulation. Ah, the good old days.

**November Problem of the Month:** (From Bill Meisel) This problem comes ultimately from my girlfriend. Here is the lab setup for a 10th grade science lab. Each student has a sheet of graph paper, and a spinner which will fall equally on any of the integers 1 to 6 and equally on any of the eight directions North, South, East, West, Northeast, Northwest, Southeast, Southwest. The students spin the spinner first for a number, then a direction. They draw a path starting at the center of a piece of a piece of graph paper. They do this 20 times, EACH TIME DRAWING THE PATH STARTING AT THE CENTER OF THE GRAPH PAPER. Now, on average the student should move roughly 3 units on each turn and go in each direction roughly two times. So far so good. What I could not figure out was this. Why graph a picture of this? Suppose the class has 22 students. If the students look at 22 pictures and each student has done 20 trials on their individual picture, what is it they are supposed to see from the pictures that will intuitively introduce the idea of "average?" Somewhere in the back of my mind, I thought this might have something to do with the Random Walk Model, but I believe in that case you start each new trial from where the previous trial ended. If the students had followed those rules, starting each new turn where the previous one ended, would the pictures represent the idea of "average" in any clearer fashion?

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## Coming in December...

Colloquium with Dr. Kumud Singh-Altmyer from 4:00pm - 4:50pm on Friday, December 4, in Biology Lecture Hall, Room 2215. More information will be available at <http://www.cs.gasou.edu/colloquia.html>.