



Georgia Southern University

Department of Mathematics and Computer Science Newsletter

Mary Margaret Hoy, editor

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ANNOUNCEMENTS

The Tutorial Center is beginning a file of worksheets, problems, etc. for students to use. If you would like to contribute your handouts for this quarter, these would be greatly appreciated. We now have handouts available to the students of the unit circle trig values, the trig identities, and the derivative rules (for Cal students).

The last day to submit proposals for Department Foundation Grants is April 8, 1996. Submit five copies by noon on April 8 to **Lila Roberts**.

Auditions for the Ogeechee Choral Society will be held April 15, 1996, at 7:30 PM in the choir room at First Methodist Church.

The Information Technology Advisory Council has established a local deadline of 12:00 noon on Monday,

April 29, for the receipt of proposals for the second round of funding for the Technology Supported Course Development program. Anyone wishing to submit a proposal for the second funding cycle under this program should send one copy of the completed proposal to Julius Ariail at the Library administrative office (Box 8074, second floor of the Library) so that it arrives by 12:00 noon on Monday, April 29. Consideration of late submissions cannot be guaranteed. Guidelines and additional information may be obtained from **Arthur Sparks** or from the WWW at <http://www.peachnet.edu/OIIT/ITDL/tnt.html>.

PROFESSIONAL ACTIVITIES

Martha Abell attended a University System of Georgia Workshop on Conflict Resolution on March 8, 1996, at Clayton State College. All

institutions in the system are in the process of determining new ways to handle conflicts on our campuses. Martha is a member of the GSU committee to study alternate forms of conflict resolution such as mediation.

Martha Abell will present "Differential Equations: Technology and Concepts," a paper she co-authored with **Jim Braselton**, at the MAA Southeastern Section Meeting at the University of Alabama in Huntsville on April 12, 1996.

Rosalie Abraham, Ellen Fischer, Dale Gibson, and Donna Saye attended the teaching portfolio workshop held March 23-26 at GSU. During that time they worked on several drafts of their portfolios, documenting their teaching and its effectiveness. At the end, each received a \$500 grant to use to further their teaching. Donna commented that it was good, but it was exhausting!

Sharon Barrs, Elke Donovan, and **Mary Margaret Hoy** attended the "Teaching with the TI-92" miniconference at Armstrong State College held March 1-2, 1996. Elke commented that it was lots of fun to play around with the TI-92 and that she learned a lot.

Rose Mae Bogan received a \$300 Faculty Service Grant for her activities as Secretary and Chair-Elect for the Science Education Section of the Georgia Academy of Science.

Don Brown, Janet O'Brien, Martha Nolen, and Neal Saye presented "Jumpstarting College: Georgia Southern's Summer Enrichment Opportunity Program" at the National Association for Developmental Education (NADE) Conference in Little Rock, Arkansas, on March 1, 1996.

Jane Cason and **Lisa Yocco** presented "TI-82 Activities for Trigonometry" at the Eighth Annual Teachers Teaching with Technology (T³) National Conference in Jacksonville, FL, on March 17, 1996.

John Davenport and **Lila Roberts** gave a 30 minute talk on "Numerical and Symbolic Experiments in Linear Algebra" at the First Annual VSU Mathematics Technology Conference,

March 29, at Valdosta State University.

Stuart Davidson gave a talk "Optimizing the Shot-Put" at the First Annual VSU Mathematics Technology Conference at Valdosta State University on March 29, 1996.

Elke Donovan, Donna Saye, Cynthia Sikes and **Debbie Stapleton** attended the National Conference for Teachers Teaching with Technology (T³) in Jacksonville, FL, held March 15-17, 1996. Elke commented that again she attended lots of sessions on the TI-92 as well as other topics. She also enjoyed spending time with the other members of the department who attended.

Carol Nessmith attended a teleconference entitled "Evaluating and Enhancing College Teaching" at the University of Georgia on March 22, 1996. The conference was excellent, and she came away with a positive attitude towards "peer evaluation."

Arthur Sparks attended a presentation by *R. SCOTT - Information Group* on March 27, 1996, in the Russell Union Executive Board Room.

Pam Watkins was awarded a \$6591 Distance Learning Grant to develop and present

a 4-day summer workshop, "Graphing Calculators: Applications and Lessons." It is designed to help Jr. High and High School mathematics teachers integrate graphing calculators into their classes.

Pam Watkins presented "T²: Teaching with Technology" at the National Association for Developmental Educators Conference in Little Rock, AR, on February 29, 1996. She also led a related round-table discussion. For the presentation, she edited and produced a 15-minute video of sample lessons taught over GSAMS. For those who are interested, the software that she used for the video editing is called Video Director/Home which retails for \$49 and is well worth the price.

Chong-wei Xu (with Mohammed F. Gabre) published the paper "XShare, An Environment for Sharing X-Window Applications," in the Proceedings of the 11th International Conference on Computers and Their Applications (ISCA).

Chong-wei Xu accepted a grant from IEC University Program and attended the IN World Forum, Orlando, March 18-21, 1996.

Lisa Yocco presented "Linear and Quadratic

Modeling with the TI-82" at the VSU Mathematics Technology Conference held at Valdosta State University on March 29.

Lisa Yocco attended the Houghton Mifflin Developmental Math Workshop in Orlando, FL, made possible by a grant from the Faculty and Development Welfare Committee.

CNAPS PARALLEL PROCESSING MACHINE

Submitted by **Ahmed Barbour**

After long waiting and discussion about the cheapest available multiprocessor computer in the market today, we finally got the CNAPS Parallel Processing Machine from Adaptive Solutions, Inc.

The CNAPS has the following characteristics:

(1) The CNAPS Array is a one chip set made up of the CNAPS-1064 Digital Parallel Processor. It has 64 processors (PNs) configured for SIMD execution. Each PN in the array is a complete fixed-point arithmetic processor with its own on-chip 4K Bytes of local memory that can perform 1-bit, 8-bit, or 16-bit integer

arithmetic. It can execute a complete multiply-and-accumulate operation in one clock cycle.

(2) The architecture of the CNAPS lends itself well to the computational problem presented by image processing, signal processing, and neural networks where a large number of simple but similar calculations need to be performed on a relatively large amount of data.

The CNAPS will be available on our network when the installation is completed. The CNAPS (64 processors), the Butterfly GP1000 (32 Processors), the Hypercube Transputers with 8 and 4 nodes parallel computers and the PVM, are all part of our NSF and GSU research grants to establish a parallel processing laboratory.

MATH 151 COMMITTEE

The day-to-day outline for the Math 151 course has been revised as of 3/26/96. (See Dana if you have not received a copy.) Thanks to all faculty who sent comments and suggestions to the committee concerning the textbook and the day-to-day outline. We will continue to use College Algebra by Lial, Miller and Hornsby for the next year.

CAMPUS COMMITTEES

Anne Pierce is working with the GSU Committee on the Gender Equity in Science and Mathematics Education Through Instruction Reform (InGEAR) NSF Grant held by Georgia Tech. The group will develop a workshop for University faculty to be used in Fall 1996. Please let Anne know about any gender equity materials you find related to math and computer science or science and technology in general.

Arthur Sparks served on a university committee to screen proposals to the first round of funding for the Technology Supported Course Development program. This program is being administered by the University System's Office of Information and Instructional Technology (OIIT), and funding is available through the Chancellor's Connecting Teachers and Technology Initiative.

MAA NEWS

Submitted by **Martha Abell** and **Jim Braselton**

The group plans to have at least two special presentations this quarter. **Cindy Gonzalez** will give a presentation on the TI-92 at one meeting. **Stuart**

Davidson will give a talk on a nice application of mathematics in sports. Of course, all faculty are welcome to attend our meetings as are students that are not official members. Watch for more details. Many of our active members over the last two years are now student teaching and will be graduating in June, so please assist us in encouraging students to participate in our student chapter of MAA.

PERSONAL NEWS

Joyce Strozso will be having surgery to repair a herniated disk in her neck on Tuesday, April 2, 1996. She will not be teaching this quarter due to her recovery. We all wish her well.

PROBLEM OF THE MONTH

Submitted by **Bill Meisel**

Suppose you wish to use Newton's method (only) to find the roots of $ax^4 + bx^3 + cx^2 + dx + e = 0$ given that both sets of roots are complex. How do you go about making a first estimate of the root?

This is more of a question than a problem, and Bill knows there are other, more efficient methods of solving the quartic, but he is specifically interested in this scenario.

APRIL BIRTHDAYS

Deloris Hodges	09
Elke Donovan	14
Rosalyn Wells	22
Dana Brannen	26



HAPPY BIRTHDAY!!!

