

Friday, October 29, 2004

FRI - S1 Poydras A 10:30 AM - 12:15 PM

## COMPUTER ALGEBRA SYSTEMS IN TEACHING ALGEBRA

Wade Ellis, *West Valley College*

Bernhard Kutzler, *Austrian Center for Didactics of Computer Algebra*

Brenda Bratten, *Thomas Heywood Academy*

Tom Reardon, *Fitch High School*

Natalie Jakucyn, *Glenbrook High School*

CAS's have been used in teaching calculus, differential equations and linear algebra since the 1980s. However, the use of CAS in teaching lower division or developmental algebra courses has not been as widespread. This mini-symposium will present four mathematics faculty that are working successfully in this area to describe and discuss their successes in using CAS's to improve and enhance student performance in such algebra courses. Difficulties in deciding on and acquiring CAS software will be considered along with obstacles in finding materials suitable for student use and convincing colleagues that teaching algebra with any kind of software can be beneficial for students at this level.

FRI - S20 Esplanade A 12:30 PM - 2:15 PM

## CRYPTOLOGY IN THE CLASSROOM

Edmund Lamagna, *University of Rhode Island*

Bill Bauldry, *Appalachian State University*

Cryptology builds on a wide range of mathematical topics. A successful course can be taught to a variety of audiences. Classical and modern cryptographic techniques will be illustrated using both MAPLE and web-based materials. Novel aspects of cryptosystems, student activities, and projects will be demonstrated and discussed.

FRI - S35 Poydras B 3:00 PM - 4:45 PM

## USING ACTIVE LEARNING AND THE INTERNET TO TEACH UNDERGRADUATE STATISTICS

F. Michael Speed, G. Donald Allen, Eric Hintzee,

Kathleen Speed, *Texas A&M University*

The mini-symposium will have 4 parts:

1. A detailed discussion of the online components which the students watch at home and the one-day-a-week lab and the exam results.
2. Results of the Statistical Anxiety Test survey.
3. Results of the focus groups.
4. Tips on creating multimedia videos.

FRI - S43 Poydras A 4:00 PM - 5:45 PM

## CURRENT PRACTICES ON USING HANDHELD TECHNOLOGY IN DEVELOPMENTAL ALGEBRA

Ed Laughbaum, *The Ohio State University*

Rob Farinelli, *Community College of Allegheny County - Boyce Campus*

Sharon North, *St. Louis Community College at Florissant Valley*

Barbara Tozzi, *Brookdale Community College*

Pansy Waycaster, *Virginia Highlands Community College*

Speakers will discuss various methods for teaching developmental algebra concepts through the use of handheld technology. This may include teacher-centered lessons, student-centered learning activities, summative projects, etc.

Saturday, October 30, 2004

SAT - S61 Gentilly 8:00 AM - 9:45 AM

## COMPUTER ALGEBRA IN CALCULUS - A SELECTION OF DIFFERENT APPROACHES

Douglas Meade, *University of South Carolina*

Philip Yasskin, *Texas A&M University*

John Veiling, *CUNY - Brooklyn College*

John Polking, *Rice University*

Carl DeVore, *University of Delaware*

Freidhelm Schwarz, *University of Toledo*

There are many ways to use a computer algebra system in the classroom: graphical demonstrations, numerical simulations, customized user interfaces. Another dimension to this discussion is the level of CAS proficiency expected of the students. The speakers in this mini-symposium will present different perspectives on CAS use in calculus.

SAT - S74 Poydras A 10:30 AM - 12:15 PM

## HANDHELD TECHNOLOGY IN PRESERVICE COURSES FOR PROSPECTIVE SECONDARY SCHOOL MATHEMATICS TEACHERS

Edward Connors, *University of Massachusetts, Amherst*

Mary Ann Connors, *Westfield State College*

Judy O'Neal, *North Georgia College and State University*

This mini-symposium will consist of presentations by four experienced instructors of preservice courses for prospective secondary school mathematics teachers. The focus will be on the use of handheld technology such as the TI-89, TI-83 Plus, and Voyage 200 in secondary school mathematics courses algebra, geometry, statistics, and calculus.

SAT - S92 Esplanade A 12:30 PM - 2:15 PM

## OPTIMIZATION IN MATHEMATICS

William Fox, Hank Richardson, *Francis Marion University*

Mark Parker, *Carroll College*

Dale Peterson, *United States Air Force Academy*

Mike Jaye, Steve Horton, *United States Military Academy*

John Kobza, *Texas Tech University*

A mini-symposium for teachers of linear programming and optimization is provided. Newest technology for practitioners as well as education software will be presented.

SAT - S120 Poydras A 3:30 PM - 5:15 PM

## INTERACTIVE TEACHING STRATEGIES USING THE TI-83+/84+ CALCULATOR IN SECONDARY MATHEMATICS PRESERVICE TEACHER EDUCATION PROGRAMS

Patsy Fagan, *Drake University*

Karen Allen, *Valparaiso University*

Stephanie Lochbaum, *Austin Community College*

Terrie Poehl, *Louisiana State University*

Marcia Weller Weinhold, *Purdue University Calumet*

How do we enrich the secondary mathematics preservice teacher education programs so that when students "teach as they've been taught" they will use meaningful, interactive teaching strategies? Experienced educators discuss facing the challenges of preparing preservice teachers to teach mathematics for understanding in the high school using the TI-83+/84+ calculators.