

22ND ANNUAL GEORGIA PERIMETER COLLEGE

Mathematics Conference
Technology: R U Onboard?



February 27 & 28, 2009, Clarkston Campus

22nd Annual Georgia Perimeter College Mathematics Conference

Conference Guest Speakers

Welcome

Dr. Anthony Tricoli
President, Georgia Perimeter College

Introduction of Speaker

Jeff Gutliph
Chairperson, Georgia Perimeter College Mathematics Conference

Keynote Address

Frank Wilson, Professor of Mathematics
Make It Real Learning

About the Keynote Speaker

Frank has been recognized for teaching excellence while serving students at the United States Air Force Academy, Green River Community College, and Chandler-Gilbert Community College. He was honored to serve for two years as the Chair of the Technology in Math Education Committee of the American Mathematical Association of Two Year Colleges. He is also an active member of the National Council of Teachers of Mathematics.

Educators around the world have embraced Wilson's award-winning mathematics textbooks which focus on teaching mathematics in the context of real world applications. His textbooks Finite Mathematics and Applied Calculus, Brief Calculus, Finite Mathematics, and Applied Calculus are available through Cengage Learning. Three new books (Algebra and Trigonometry, Precalculus, and College Algebra) will be available by 2011. Wilson regularly gives keynote presentations and workshops to inspire educators. He is founder and President of Make It Real Learning Company, a company which creates math worksheets which address the question, "When am I ever going to use this?" Teachers may download free worksheets from www.makeitreallearning.com.

Frank enjoys fine dining, art museums, swimming, and coaching his son's soccer team. He loves spending time with his wife and five living children.

Announcements

Evaluation Forms

Please complete evaluation forms for each session you attend and give your completed forms to the presider of the session. The conference evaluation form will be available online at www.gpc.edu/~gpcmathc/survey. We value your feedback and appreciate you taking the time to submit your comments.

Name Badges

Please return your name badge to the registration table after you have attended your last conference event.

Parking

If you receive a parking ticket, turn it in at the registration table.

Thank you for attending and enjoy the conference!

Conference Schedule at a Glance

Friday, February 27, 2009

Time	Event	Location
8:30 AM	Registration Begins	N Building, 2 nd floor
9:00 AM – 12:30 PM	Technology Demonstrations	N Building
10:00 – 11:30 AM	Workshop A	N 2240
	Workshop B	N 2230
11:00 - 12:45 PM	Lunch	N 2220
12:45 – 1:45 PM	Welcome & Keynote Addresses	N building, 2 nd floor
2:00 - 5:00 PM	Parallel Sessions	N & C Buildings
3:45 PM – 4:00 PM	Refreshments	N Building
5:00 – 5:45 PM	GMATYC Meeting	N 2240
6:00 - 7:30 PM	Dinner	N Building, 1 st floor

Saturday, February 28, 2009

Time	Event	Location
8:00 – 8:50 AM	Breakfast	N 2220
9:00 - 10:30 AM	Workshop C	N 2230
	Workshop D	C 1160
10:30 - 10:50 AM	Break	N building, 2 nd floor
10:50 - 12:20 PM	Workshop E	N 2230
	Workshop F	N 2240

Friday, February 27, 2009

Technology Demonstrations, 9 a.m. – 12:30 p.m.

Demos will be on-going during this time period.

N-2110	Focus Group on the Latest Trends in Mathematics Technology Alexandra Coleman, Cengage
N-2120	Improving Student Performance With Mastery Based Software Merideth Kolaski, Hawkes Learning
N-2130	Maple Demonstration
N-2210	Discover Why ALEKS and MathZone WILL Help You and Your Students Achieve Math Success Paul Yelverton, McGraw-Hill
N-2250	MyMathLab, MyMathTest, and Vista/MML Powerlink Linda Winer, Pearson

Workshops

10:00 a.m. – 11:30 a.m.
Workshop A An Intelligent Partnership between Algebra Manipulatives and the TI-Nspire CAS Darlene Whitkanack N 2240
Workshop B Assessing an Objective-based Curriculum Through Test Item Analyses Terry Barron N 2230

Parallel Sessions

Room/ Time	2:00 – 2:45	3:00 – 3:45		4:00 – 4:45	5:00 – 6:00
N 2250	1. Sudoku Calculus	6. Survival Schemes In Learning Support Mathematics	Refreshments – Join Us for a Break!	11. Integrating Mathematics with Technology: Area of Circles	GMATYC Meeting, N 2240
N 2240	2. Lies, Damned Lies, and Slot Machines: Where Probability Meets Psychology	7. Using Probability and Statistics as a Vehicle for Teaching Calculus		12. Applying the Principles of Student Centered Learning, from Beyond Crossroads, to the Statistics and Algebra Classroom	
N 2230	3. Creating videos using Camtasia and TI Smartview	8. Data Analysis in College Algebra and Precalculus		13. “ALL FROM SOME” AND “SOME FROM ALL” — An Activity to Teach Sampling Techniques	
N 2220	4. 3-in-1 for Student Success: Vista 4, MyMathLab Enterprise, and Wimba Live Classroom	9. On Board with Technology: Calculator Based Courses and Web Support		14. Panel Discussion - Teaching Math Online	
N 2120		10. The BOR Funded MESA Program at GPC			
C 1160	5. Constructing Dynamic Reproducible Graphs with a Free Java Applet (computer classroom)			15. Using Course Compass in the Class Room	

Saturday, February 28, 2009

9:00 a.m. – 10:30 a.m.		10:50 a.m. – 12:20 p.m.
<p>Workshop C</p> <p>Test Design</p> <p>Laine Bradshaw N 2230</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Break & Refreshments N building, 2nd floor</p>	<p>Workshop E</p> <p>Addressing Students' Erroneous Concepts of Probability in an Introductory College Statistics Course</p> <p>Leonid Khazanov & Fred Peskoff N 2230</p>
<p>Workshop D</p> <p>Computing MATTERS for Active Learning and Engagement in Mathematics</p> <p>Bethany Hudnutt C 1160</p>		<p>Workshop F</p> <p>Discover, Create, and Solve: Engaging Activities that Make Learning Real</p> <p>Frank Wilson N 2240</p>

Abstracts for Parallel Sessions - Friday, February 27, 2009

2:00 p.m. – 2:45 p.m.

1. Sudoku Calculus N-2250
 Queen W. Harris, Georgia Perimeter College
 Queen.Harris@gpc.edu

Participants will be given original Sudoku Limits, Sudoku Derivatives and Sudoku Integrals. During this session all three Sudoku puzzles will be solved. Participants will create their own Sudoku puzzles.

2. Lies, Damned Lies, and Slot Machines: Where Probability Meets Psychology N-2240
 Darren Allen, Georgia Military College
 dmallen@gmc.cc.ga.us

The presenter will discuss the methods, algorithms, and the patents that have been used to make gamblers feel like they "almost won" at video gaming machines. You will feel like a winner after attending this session (P.S., Don't forget to bring your allowance).

3. **Creating Videos using Camtasia and TI Smartview**

N-2230

Mary Susan Hall, GPC
Mary.Hall@gpc.edu

As we are turning more and more to online resources and courses, we must find ways to teach our students how to use technology. One form of technology that all math teachers use is the calculator. While we might have offered in class demonstrations in the past, how might we do the same thing for our online students? This demonstration offers one way to do this.

4. **3-in-1 for Student Success: Vista 4, MyMathLab Enterprise, and Wimba Live Classroom**

Tracy Cummings and Sandee House, Georgia Perimeter College
tracy.cummings@gpc.edu, sandee.house@gpc.edu

N-2220

Thinking about teaching a hybrid or online class? Or have you've been thinking about implementing iCollege in your face to face classes? This presentation (workshop) will show how the features of Vista 4, MyMathLab Enterprise, and Wimba Live Classroom can help you easily create dynamic, interactive courses for your students. You will also see courses for Math0097, Math0098, and Math1111 that you can copy and implement right away with minimal changes (for Fall '09). And, so that you'll get a real sense of how the Wimba Live Classroom tool works, many portions of this presentation will be streamed live from Seattle, Washington.

5. **Constructing Dynamic Reproducible Graphs with a Free Java Applet**

C-1160

Tom Cooper, North Georgia College & State University
tecooper@ngcsu.edu

The presenter will demonstrate a free Java applet for plotting points, polygons, vectors, and functions in parametric or Cartesian form that can be dynamically updated with slider controlled variables. These graphs can be pasted as images into other applications or recreated as applets in html documents.

3:00 p.m. – 3:45 p.m.

6. **Survival Schemes In Learning Support Mathematics**

N-2250

Barbara J. Jolley, Macon State College
barbara.jolley@maconstate.edu

Statistical data has implied that mathematics is an academic course that is difficult to understand and learn. The presenter will share a series of teaching schemes that are designed to perpetuate student success in Learning Support Mathematics.

7. Using Probability and Statistics as a Vehicle for Teaching Calculus

N-2240

Marty Thomas, Georgia Gwinnett College
athomas1@ggc.usg.edu

The presenter will provide techniques for using statistics to teach practical applications of differentiation and integration to undergraduates. The presenter will illustrate how these techniques may be used in teaching the conceptual ideas behind more advanced topics like multivariate calculus. Using Microsoft Excel in this process is also considered.

8. Data Analysis in College Algebra and Precalculus

N-2230

Robby Williams, Georgia Perimeter College
James.Williams@gpc.edu

Recommendations from national professional organizations about the role of data analysis in the undergraduate mathematics curriculum and the role of data analysis in the new Georgia performance standards for K-12 mathematics will be discussed. Activities and projects appropriate for inclusion in a College Algebra or Precalculus course will be included.

9. On Board with Technology: Calculator Based Courses and Web Support

N-2220

Mary Dwyer Wolfe & Barry Monk, Macon State College
mary.wolfe@maconstate.edu, barry.monk@maconstate.edu

This presentation will include a demonstration of presenter-made and other web tools and videos designed for primary and secondary instruction of core courses, some of which are calculator based. These tools are freely available online for others to use. The web tool construction process will also be discussed.

10. The BOR Funded MESA Program at GPC

N-2120

Dr. Kouok Law, Georgia Perimeter College
kouok.law@gpc.edu

The BOR started funding MESA programs at four Georgia Colleges since Fall 2007. This presentation will report on the challenges and progress made at GPC since then. We will discuss the key components of MESA such as Academic Excellence Workshops, the MESA Center, the tutoring service provided, and other various activities, and what make them work. Participants will see how the ideas behind MESA can be implemented at other institutions, and will be very welcome to propose suggestions to improve the program.

11. Integrating Mathematics with Technology: Area of Circles

N-2250

Hyeonmi Lee and John Olive, The University of Georgia
hmdoban@uga.edu and jolive@uga.edu

Coherence and connection between concepts, between topics, or between theory and real life is the nature of mathematics. This idea is the foundation that the integrated mathematics curriculum pursues, recently adopted by the Georgia Department of Education. It is expected that teachers model coherent and connected mathematics for students while they implement the new curriculum. We illustrate how technology can help teachers to integrate mathematics through their teaching, supporting the foundation idea.

12. Applying the Principles of Student Centered Learning, from Beyond Crossroads, to the Statistics and Algebra Classroom

N-2240

Ralph L. Wildy Jr., Art Mark, Georgia Military College, Augusta, Ga. Campus
rwildy@gmc.cc.ga.us

The Beyond Crossroads document has recommendations for the classroom learning environment that recommends a more student centered approach to mathematics education. Focusing on Statistics and Algebra, techniques and software that facilitates student centered learning will be discussed.

13. “ALL FROM SOME” AND “SOME FROM ALL”

N-2230

Susan Mathews Hardy, Kennesaw State University
shardy@kennesaw.edu

Giving candy out instead of surveys, excites interest in the students as you break them into clusters and strata. The class becomes game show like as different random and nonrandom sampling techniques are discussed. The side benefit is that students see their similarities and differences, and get to know each other.

14. Panel Discussion on Teaching Math Online

N-2220

Andrea Hendricks, Calandra Davis, Mary Sue Hall, and Diane Wilson, Georgia Perimeter College
andrea.hendricks@gpc.edu, calandra.davis@gpc.edu; mary.hall@gpc.edu;
diane.wilson@gpc.edu; sandee.house@gpc.edu

The presenters will discuss issues related to teaching math online and share their experience as completely online full-time faculty. Time will be given to allow questions from the audience.

15. **Using CourseCompass in the Class Room**
Hubert McClure, Tri County Technical College
hmclure@tctc.edu

C-1160

Used in mathematics courses, CourseCompass can support with recordkeeping, course management, student resources with different learning styles, and infinite practice problems for students, instant feedback and the ability for students to send questions to their instructor. CourseCompass significantly assists the instructor, student, and class as a whole. This session will address and discuss tips for implementation in the classroom from another professor's experience with it.

Abstracts for Workshops

Friday, February 27, 2009, 10:00 a.m – 11:30 a.m.

Workshop A: N-2240
An Intelligent Partnership between Algebra Manipulatives and the TI-Nspire CAS by Darlene Whitkanack

The developmental algebra curricula have undergone some changes with the infusion of technology, but are we making a difference in mathematical understanding or retention? We need to rethink ways of combining some of the exciting developments which will provide students with a way to discover and understand concepts. Come! Play!

Workshop B: N-2230
Assessing an Objective-based Curriculum Through Test Item Analyses by Terry Barron

As the emergence of out-come or objective-based education increases, so is the need to assess the curriculum. This session addresses one way, through test item analyses, that instructors can start to assess their lesson and course objectives and link department and program goals to college goals and mission statements.

Saturday, February 28, 2009, 9:00 a.m. – 10:30 a.m.

Workshop C: N-2230
Test Design by Laine Bradshaw

This session will offer new insights into the familiar process of building classroom assessments by using similar techniques that testing experts commonly use. When to appropriately use various item types and how to construct useful and defensible items and tests will be discussed. Evaluating test items after they have been given to students will also be demonstrated.

Workshop D:

C-1160

Computing MATTERS for Active Learning and Engagement in Mathematics by Bethany Hudnutt

Computing matters in mathematics. Move beyond power point and learn how you can readily integrate dynamic, free, online resources into your teaching that will actively engage your students. This session will showcase inquiry methods that leverage technology for teaching and learning.

Saturday, February 28, 2009, 10:50 a.m. – 12:20 p.m.

Workshop E:

N-2230

Addressing Students' Erroneous Concepts of Probability in an Introductory College Statistics Course by Leonid Khazanov & Fred Peskoff

This workshop will provide statistics instructors with the opportunity to learn about students' faulty conceptions regarding probability. Participants will be informed about common misconceptions and will participate in a variety of activities aimed at correcting them. In addition, the facilitators will share with the audience their own successes and failures in combating misconceptions. The audience will also play probability games and engage in contingent thinking (i.e. thinking like their students). All participants will receive a package of instructional materials, diagnostic tests, and other useful information.

Workshop F:

N-2240

Discover, Create, and Solve: Engaging Activities that Make Learning Real by Frank Wilson

In this hands-on session, participants will work through classroom activities that engage students in the learning process. By learning mathematics in interesting real world contexts, students are able to discover the personal relevance of the mathematics they learn. All participants will be given a packet of learning activities they can use in their classes.

The Georgia Perimeter College Mathematics Conference Committee thanks the following for their contributions and generous support of this conference.

Cengage

Hawkes Learning

McGraw-Hill (contributed to refreshments)

Pearson Education (contributed to breakfast)

Georgia Perimeter College Bookstores