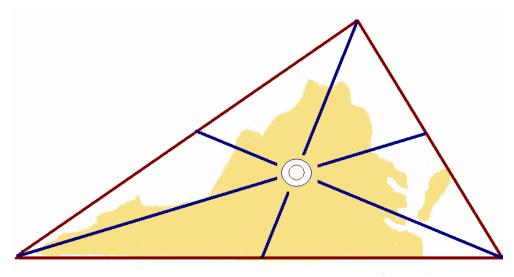
### VCCS Sponsored Peer Groups for Mathematics and Computer Science

Meeting in conjunction with



Virginia Mathematical Association of Two-Year Colleges

### Meet You in the Middle

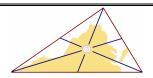


Celebrating 22 Years

22<sup>nd</sup> Annual VMATYC Conference April 4-5, 2008 Piedmont Virginia Community College Charlottesville, VA

### Conference Schedule

Friday Afternoon at PVCC 1:00pm-5:00pm



**Registration** 1:00-5:00pm at the North Mall Meeting Room, Room 228. Vendor display tables will be set up during that time in Room 228 also.

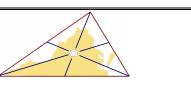
**Welcome** 1:45-1:55pm, room 229. PVCC Dean of Math, Science, and Human Services Ann Smith will greet us.

### Friday Presentations:

	2:00-2:50pm	3:10-4:00pm	4:10-5:00pm
154	DPGraph with Jerry		
158	A 3-D Math Odyssey with Joseph Joyner	Roundtable Discussion on Precalculus and Calculus with TJ Johnson	
159	Information on the PVCC SciTE Grant Project with David Duvall Early	Student Papers and Presentations in Mathematics for the Liberal Arts (30 min.) with Bruce Wahl	
160	Virginia Math SOL's and You with Laura Bridge	The True Connection Between the Integers and the Polynomials: A Basic Review of Abstract Algebra with Brian Johnson	
179	Texas Instruments Technology Presentation with Dr. Kurt Harper	Developmental Studies SIG with Richard Watkins	
229		We're Still Gaiseing with Judy Williams, Christy Hewett, and John Gallo	How to Update the Master Course File with Bill Hightower

Conference Schedule

Friday Evening at the Comfort Inn, 5:30-9:30pm



**5:30-6:30pm** Appetizers and refreshments provided by Pearson Publishing at the Comfort Inn.

**6:30-9:30pm** Dinner Banquet and Keynote Address at the Comfort Inn.

### 7:15pm

Introduction and Welcome of AMATYC Mid-Atlantic Vice President Ruth Collins by Ann Loving, President-Elect of VMATYC, followed by remarks from Dr. Collins.

Introduction and Welcome of AMATYC President-Elect Rob Farinelli, by Ann Loving, President-Elect of VMATYC, followed by remarks from Dr. Farinelli.

**7:30pm** Introduction and Welcome of our keynote speaker Dr. Susan Wood by Dr. Kathleen Hudson, Vice President of Instruction and Student Services, PVCC. Susan S. Wood, Ed.D. is the Assistant Vice Chancellor for Institutional Effectiveness. Her keynote presentation is entitled: *Mathematical Mystery Tour: Excellence in the Middle.* 

### Conference Schedule Saturday April 5, 2008



**7:00-8:00am** Breakfast will be served at the Comfort Inn. Continental breakfast, waffles, hard-boiled eggs, cereals, oatmeal, orange juice, and coffee will be ready. Breakfast is included with the price of lodging.

8:30-9:30am Business Meeting at the PVCC Auditorium, room 229.

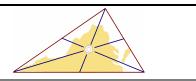
**Saturday presentations at PVCC:** 

	9:50-10:40am	11:00-11:50am	12:10-1:00pm
154	SciTE Scholar Student Presentations Mathematics in the Science Disciplines with David Duvall-Early		VCCS Placement and Assessment Update with Judy Williams and Will Galliher
158		Teaching the Millenial Generation How <i>Beyond Crossroads</i> Can Help with Martha Goshaw and Rob Farinelli	
159	Distance Education and Instructional Technology Special Interest Group with Chris Allgyer	Get to the Chocolate-y Middle of What "Average" Means with Alison Bisson	Archimedes and π with Ron Persky
160	Crime, the Law, and Math with George DeRise	Improving Student Performance Through Mastery Based Software with Jordan Enzor of Hawkes Learning	More Visualization of Mathematics with Jonathan Wilkin
179		The Magic of Calculus with TJ Johnson	Course Review Steering Committee with Linda Taylor
811	Adding Rational Expressions—Building Good Problems with Diane Valade	Habits of Mind, Habits of Students in Mathematics with Ruth Collins	Statistics Roundtable with Murali Mahavadi
834	Pearson Publishing Presentation on MyMathLab with Rob Brown, III		

1:00pm Lunch from Littlejohn's Delicatessen, and final door prices--PVCC North Mall Meeting Area and room 229.

Please turn in your name tag holder and evaluation forms—thank you!

### **Presentation Abstracts**



### Friday April 4, 2008

### 2:00-4:00pm DPGraph Workshop with Mr. Jerry Thornhill of SVCC, Room 154.

DPGraph is a marvelous 3D graphing utility that has applications to mathematics at many levels. It is inexpensive but powerful. This is an active workshop to explore the basics.

### 2:00-2:50pm A 3-D Math Odyssey with Mr. Joseph Joyner of TCC, room 158.

Join us for a brief discussion and presentation of software and equipment used to begin exploration of the design of animated 3D movies on topics and concepts taught in math courses in an informative yet appealing way that is generally not possible in the normal classroom setting.

# 2:00-2:50pm *Information on the PVCC SciTE Grant Project* with Mr. David Duvall-Early of PVCC, room 159.

Computer Science Professor Duvall-Early will report on an NSF-funded grant program at PVCC to help support **Sci**ence, **T**echnology, and **E**ngineering students.

### 2:00-2:50pm Virginia Math SOL's and You with Ms. Laura Bridge of PVCC, room 160.

How much do you know about Virginia's Standards of Learning (SOL) for Mathematics? Come explore the Standards themselves, how they have changed since implementation, and how high school teachers have changed instructional methods in response so that you may gain a better understanding of your students.

### 2:00-2:50pm Texas Instruments Technology Presentation with Dr. Kurt Harper, room 179.

Dr. Harper of Texas Instruments will be demonstrating the latest in grapher technology and software, including TI Navigator, TI-Smartview, and TI-Nspire.

# 3:10-4:00pm Roundtable Discussion on Pre-Calculus and Calculus with Mr. TJ Johnson of BRCC, room 158.

Come to share your experiences and ideas as TJ leads us in a discussion of issues pertaining to pre-calculus and calculus. We'll tackle such questions as "Is your Pre-Calculus getting your students ready for Calculus?"

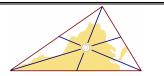
# 3:10-3:40pm Student Papers and Presentations in Math for the Liberal Arts with Dr. Bruce Wahl of NVCC, room 159.

In the spirit of liberal arts, students in Mathematics for the Liberal Arts classes complete semester-long communications projects. The presenter will describe the process of assigning, collecting, and grading papers (in MTH 151) and presentations (in MTH 152).

# 3:10-4:00pm The True Connection Between the Integers and the Polynomials: A Basic Review of Abstract Algebra, with Dr. Brian Johnson of NVCC, room 160.

The integers and the polynomials over  ${\bf R}$  have many common features. Ones with which we are familiar from our teaching of Developmental Mathematics include a long division algorithm, proper/improper fraction representations, and factoring. Another shared characteristic is infinitely many primes. A review of Basic Abstract Algebra will explain why these domains have so much in common.

### Presentation Abstracts (continued)



# 3:10-4:00pm *Developmental Studies Special Interest Group* with Richard Watkins of TCC, room 179.

Letter grades in developmental courses and modular approaches will likely be two of the topics to be discussed at this session.

# 3:10-4:00pm *We're Still Gaise-ing* with Judy Williams, John Gallo and Christy Hewett of TCC, room 229.

The presenters have studied the "Guidelines for Assessment and Instruction in Statistical Education" (GAISE) in several settings during the past two years. In this session they will involve participants in activities they have created or adapted for their own students based on recommendations from the American Statistical Association.

### 4:10-5:00pm *How to Update the Master Course File* with Mr. Bill Hightower of the VCCS, room 229.

Mr. Bill Hightower, Director of Educational Programs with the Academic Services and Research Department of the VCCS, will describe how to update course descriptions in the Master Course File – from conception to completion.

#### Saturday April 5, 2008

### 9:50-10:40am SciTE Scholar Student Presentations, room 154.

Three groups of four PVCC SciTE Student Scholars (Science, Technology, and Engineering NSF scholarship recipients) will present on the topic of how they utilize mathematics in their respective scientific disciplines.

# 9:50-10:40am *More Visualization of Mathematics* with Mr. Jonathan Wilkin of NVCC, room 158.

Jonathan will use Sketchpad to illustrate various aspects of the mathematics we teach, including the derivative as a limiting secant line, the proof of the Fundamental Theorem of Calculus, fixed points of transformations, and eigenvalues and eigenvectors.

# 9:50-10:40am *Distance Education and Instructional Technology Special Interest Group* with Chris Allgyer of MECC, room 159.

Come discuss the latest developments in distance education and instructional technology as they affect our community college teaching and learning environments.

### 9:50-10:40am *Crime, the Law, and Math* with Dr. George DeRise of TNCC, room 160.

Various actual criminal cases involving drug deals, art forgeries, and even O.J. Simpson are presented where math plays an important part. Some of the adventures of Charlie Epps from the TV Series Numbers are presented and the math explained.

### 9:50-10:40am *Pearson Publishing Presentation of MyMathLab* with Rob Brown III, room 834.

Mr. Rob Brown III of Pearson publishing will demonstrate the MyMathLab learning environment and how it enhances the textbook experience online.

### Presentation Abstracts (continued)



# 11:00am-1:00pm *Teaching the Millenial Generation—How <u>Beyond Crossroads</u> Can Help with Martha Goshaw of Seminole Community College and Rob Farinelli of the College of Southern Maryland, room 158.*

Most of today's college students belong to the Millenial Generation, a confident multi-tasking group of computer literate high achievers. The presenters will review recommendations from AMATYC's *Beyond Crossroads* and then involve participants in instructional strategies to bridge the generation gap in the teaching of college mathematics courses. Activities suitable for algebra, calculus, and statistics will be presented.

# 11:00-11:50am *Get to the Chocolate-y Middle of What "Average" Means* with Ms. Alison Bission of NVCC, room 159.

Use M&Ms to discuss the difference of mean, median, mode, standard deviation, expectations, and goodness of fit. This is a good project to use in a liberal arts math course that involves statistics, like Math 152. It can also be used in statistics courses.

# 11:00-11:50am *How to Motivate Students to Learn by Using Software* with Mr. Jordan Enzor of Hawkes Learning Systems, room 160.

Discover the benefits of using interactive software in teaching and learning mathematics. Hawkes Learning Systems promotes grade improvement and motivates students to learn by providing tutorials, unlimited practice, helpful feedback provided by artificial intelligence, and mastery-based homework. Come see a demonstration of our state-of-the-art test generator, online gradebook and student courseware! Also, everyone who attends will be entered to win a MP3 multimedia player, which will be raffled at the end of the presentation!

### 11:00-11:50am The Magic of Calculus with Mr. TJ Johnson of BRCC, room 179.

A dramatic presentation, using live actors interacting with Java content projected onto a smart board, will tell the story of the Fundamental Theorem of Calculus. This unique collaboration will demonstrate how narrative in combination with kinetic learning can dramatically improve mastery and retention of difficult material.

# 11:00-11:50am *Habits of Mind, Habits of Students in Mathematics* with Dr. Ruth Collins of Walden University, room 811.

The more we talk about our students, the more we realize the behaviors they share. A look at some common student behaviors in mathematics with regards to student understanding, questioning, homework, and testing.

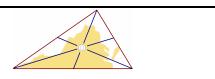
# 12:10-1:00pm *VCCS Placement and Assessment Update* with Judy Williams of TCC and Will Galliher of MECC, room 154.

The VCCS Placement Test Task Force has been meeting since August 2007. Hear a summary of the discussions and pending recommendations. How uniform should we make the testing procedures? Who should be tested and when? How should we handle cut scores when our courses have different credit value and/or content? Should there be one mandatory score for placement into college credit courses? What proxies, if any, are acceptable in lieu of a placement test?

# 12:10-1:00pm *Archimedes and* $\pi$ with Ron Persky of Christopher Newport University, room 159.

In an effort to find  $\pi$ , Archimedes inscribed and circumscribed regular polygons in and around a circle. Just how is the topic of this presentation.

### Presentation Abstracts (continued)



# 12:10-1:00pm *Adding Rational Expressions—Building Good* Problems with Diane Valade of PVCC, room 160.

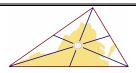
Many of us work with our students on adding and subtracting rational expressions. Have you ever been frustrated with the how few of these problems utilize the "last step" in the process: "Factor the numerator and cancel any common factors with the denominator"? I'll share the development of several algorithms so you can write problems for worksheets or tests that will need that last step and simplify nicely.

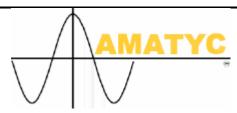
# 12:10-1:00pm *Course Review Steering Committee* with Linda Taylor of NVCC, room 179. Linda Taylor will lead this discussion of "next steps" on course review as we follow up on Mr. Hightower's presentation from the previous evening. All are welcome to attend and discuss this important topic affecting our curriculum across the state.

#### 12:10-1:00pm Statistics Roundtable with Murali Mahavadi of PVCC, room 811.

Come join our discussion of statistics courses as we delve into such topics as best teaching practices and effective utilization of software.

### VMATYC, An Affiliate Member of AMATYC





The American Mathematical Association of Two-Year Colleges (AMATYC) mission is to promote and increase awareness of the role of two-year colleges in mathematics education and to:

- Ensure the preparation of scientifically and technologically literate citizens who are capable of making educated decisions, who have skills needed by business and industry, and who will continue to educate themselves;
- Lead the development and implementation of curricular, pedagogical, and assessment standards for two-year college mathematics education;
- Assist in the preparation and continuing professional development of a competent and diverse mathematics faculty skilled in a variety of teaching and learning techniques;
- Serve as a network for communication, policy determination, and action among faculty, affiliates, and other professional organizations; and
- Communicate two-year college mathematics perspectives in public, business, and professional sectors.

Visit the AMATYC website at www.amatyc.org for more information and events.

**AMATYC Conferences:** November 20-23, 2008 Washington D.C., November 12 - 15, 2009 Las Vegas, Nevada.

#### **AMATYC Summer Institutes:**

- GAISEing Beyond the Crossroads: Improving Instruction in Introductory Statistics, On Cape Cod in West Barnstable, Massachusetts, June 15-20, 2008.
- o <u>AMATYC Teacher Preparation Summer Institute: Meaningful Mathematics for Future Teachers</u>, Green River Community College, Enumclaw, WA June 19-23, 2008.
- o AMATYC MAC<sup>3</sup> Summer Institute: Mathematics Across the Community College Curriculum, Middlesex Community College, Lowell, MA, July 15-18, 2008.

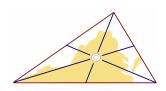
#### PRESIDENT:

Richelle (Rikki) Blair Lakeland Community College 7641 Winding Trail Concord, OH 44077 richelle.blair@sbcglobal.net

#### **Mid-Atlantic Vice President:**

Ruth Collins Walden University lv2fly@comcast.net

### Special Interest Group (SIG) or Committee





Ways to get involved!

#### **Computer Science SIG**

Maintains contact with computer science faculty and promotes participation. For more information, contact NV Vinton, vfitton@nvcc.edu

#### **Course Review Steering Committee**

A committee being formed that will look at the issues involved with updating the VCCS master course file.

For more information, contact Linda Taylor, Itaylor@nvcc.edu

### **Developmental Mathematics SIG**

Allows an ongoing discussion of these important courses and brings our concerns to the VCCS. For more information, contact Richard Watkins, RWatkins@tcc.edu

#### Distance Education and Instructional Technology SIG

Promotes the wise use of all forms of instructional technology, oversees the VMATYC listserv, produces the newsletter, and provides ongoing information and techniques used in distance education courses.

For more information, contact Chris Allgyer, callgyer@me.vccs.edu

#### **Nomination Committee SIG**

In odd calendar years, provides a slate of nominees according to the bylaws. Members are appointed by the executive board.

For more information, contact Linda Taylor, Itaylor@nvcc.edu

#### **Placement and Assessment SIG**

Provides our voice to the VCCS on these issues.

For more information, contact Will Galliher, wgalliher@me.vccs.edu

### **Planning for AMATYC 2008**

This group is making preparations for VMATYC's service as a local host for the AMATYC Conference to be held nearby in Washington, D.C. on November 20-23, 2008. For more information, contact Judy Williams, jwilliams@tcc.edu

#### **Scholarship Committee**

Determines the criteria for awarding scholarships, selects recipients, and suggests ways to accumulate the fund. Members are appointed by the Executive Board.

For more information, contact Linda Taylor, Itaylor@nvcc.edu

### 2008 Conference Team



#### **VMATYC Conference Team**

President: Sarah Martin, VWCC, smartin@vw.vccs.edu President-Elect: Ann Loving, JSRCC, aloving@reynolds.edu Past President: Linda Taylor, NVCC, ltaylor@nvcc.edu Site Coordinator: Jon Hexter, PVCC, jhexter@pvcc.edu

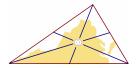
### **Piedmont Virginia Community College Host Team:**

Program Committee: Margaret Willis, Jon Bell Facilities Committee: Jon Hexter, Irina Timchenko Registration Committee: Terry Clore, Margaret Willis

Hospitality Committee: Linda Boxley, Diane Valade, Karen Gauss Hotel/Speaker/Banquet Committee: Diane Valade, Jon Hexter Prizes/Giveaways Committee: Murali Mahavadi, Diane Valade

Meet You in the Middle

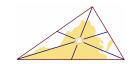
Website and Newsletter



Visit the VMATYC website at <a href="www.virginia.matyc.org">www.virginia.matyc.org</a>

Click on "Spring 2008 Newsletter" to read the newsletter online.

### Many Thanks to

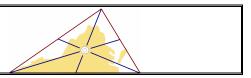


# The Virginia Community College System The Executive Board of VMATYC:

THE EXCEPTION	THE EXCOUNTED BOARD OF VIVIATION					
President	Sarah Martin, VWCC smartin@vw.vccs.edu	Past President	Linda Taylor, NVCC ltaylor@nvcc.edu			
President-Elect	Ann Loving, JSRCC aloving@reynolds.edu					
Recording Secretary	Delois McCormick, GCC dmccormick@gcc.vccs.edu	Treasurer	John Gallo, TCC tcgallj@tcc.edu			
Central VP	Nan Dupuy, CVCC dupuyn@cvcc.vccs.edu	Eastern VP	Mary Dobbs, JSRCC mdobbs@reynolds.edu			
Northern VP	Kevin Ratliff, BRCC ratliffk@brcc.edu	Western VP	Harriette Roadman, NRCC nrroadh@nr.edu			
Affiliate Delegate Sandra Dashielle, TNCC dashiells@tncc.edu dashiells@tncc.edu						
	Others Affiliated	d with VMATYC				
Newsletter Editor	Jon Wilkin, NVCC jwilkin@nvcc.edu	Historian	Frank Borleske, LFCC fborleske@lfcc.edu			
	AMATYC Officers Affiliated with VMATYC					
AMATYC President: Richelle (Rikki) Blair, Lakeland Community College, richelle.blair@sbcglobal.net						
AMATYC Past President: Kathy Mowers, Owensboro Community Technical College, Kathy.Mowers@kctcs.edu						
AMATYC Mid-Atlantic VP: Ruth Collins, Walden University, lv2fly@comcast.net						

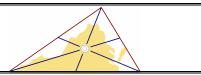
### And many thanks to:

All of our presenters, Chuck Synovec and Pearson Publishing for the wonderful appetizers Friday evening, The PVCC SciTE Scholars, The 2007 Conference team from TNCC for ideas and content for this program, Piedmont Virginia Community College Faculty, Staff, and Administration, and last but not least our sponsors and door prize donors—Texas Instruments, Cengage, Hawkes, Houghton-Mifflin, D's Market, AMATYC, Red Robin, Barnes and Noble, Waldenbooks, Pearson, Staples, Bed Bath and Beyond, Horton Winery, Radio Shack, Thinkwell Publishing, Southern States, several anonymous donors, and those we forgot to list here! ©



### From Piedmont Virginia Community College to the Comfort Inn Monticello

Directions		Distance
	otal Est. Time: 7 minutes Total Est. Distance: 3.85 miles	
START	Start out going EAST on COLLEGE RD / VA-338 toward VA-20 S / SCOTTSVILLE RD. Continue to follow COLLEGE RD.	0.5 miles
2	Turn LEFT onto VA-20 N / SCOTTSVILLE RD. Continue to follow VA-20 N.	0.2 miles
3	Merge onto I-64 E via the ramp on the LEFT toward RICHMOND.	2.6 miles
4	Take the US-250 exit- EXIT 124- toward SHADWELL.	0.2 miles
ţ	Turn RIGHT onto US-250 E / RICHMOND RD.	<0.1 miles
<del>(</del>	Turn LEFT onto NORTH HL.	<0.1 miles
<del></del>	Turn LEFT onto INN DR.	<0.1 miles
END 8	End at <b>Comfort Inn Monticello:</b> 2097 Inn Dr, Charlottesville, VA 22911, US	



### From the Comfort Inn Monticello to Piedmont Virginia Community College

Directions		Distance
	Total Est. Time: 7 minutes Total Est. Distance: 3.95 miles	
START 1:	Start out going SOUTH on INN DR toward NORTH HL.	<0.1 miles
2:	Turn RIGHT onto NORTH HL.	<0.1 miles
3:	Turn RIGHT onto RICHMOND RD / US-250 W.	0.2 miles
4:	Merge onto I-64 W via the ramp on the LEFT toward STAUNTON.	2.3 miles
5:	Take the VA-20 exit- EXIT 121- toward CHARLOTTESVILLE / SCOTTSVILLE.	0.2 miles
6:	Turn LEFT onto VA-20 S.	0.5 miles
7:	Turn RIGHT onto COLLEGE RD / VA-338.	0.5 miles
8:	End at <b>Piedmont Virginia Cmnty Collge:</b> 501 College Dr, Charlottesville, VA 22902, US	
	Total Est. Time: 7 minutesTotal Est. Distance: 3.95 miles	

#### General Directions to Hotel:

From I-64 East Exit 124 (Shadwell): Make a right at the light and take an immediate left by the island. Follow the paved driveway to the top of the hill.

From I-64 West Exit 124 (Shadwell): Make a left at the light, pass over the overpass and make a left at the island. Follow the paved driveway to the top of the hill.

From Route 29: Take the ramp to 250 East Bypass, drive 5 miles on 250 East Bypass, pass the overpass of I-64, stay on the 250 East Bypass and make a left at the island. Follow the paved driveway to the top of the hill.