
PCSM NEWSLETTER

Leaders in Mathematics Education

June 2009

PENNSYLVANIA COUNCIL OF SUPERVISORS OF MATHEMATICS

PRESIDENT'S MESSAGE

From the President

- Jane Wilburne

Summer has finally come! Sometimes I find spring has left before I have had a chance to really enjoy it, due to the craziness of the end of the academic year. I'm sure we all have the same feeling.

The Pennsylvania Council of Supervisors of Mathematics Board met this past April to discuss ways to build the membership and offer more services to our members. We are in the process of creating a listserv to improve communication between the board and members, as well as among members. This will help us send out information related to state conferences and events as well as to help keep members updated with current issues related to mathematics education.

Also, our new website is fabulous! Please take a minute to check it out: www.pcsmonline.org. The link to resources has a plethora of items that will be useful to all levels of mathematics leaders. Particularly worth checking is the list of current research

Please check the date on the mailing label of the newsletter. If the date is 2009 (09) or earlier, it is time to renew your membership. Save money by renewing for three years. If each of us signs up a new member, our membership will double!

report summaries that are listed. I'm sure there will be something of interest to you if you check it out.

We are making final plans for the PCSM conference held in conjunction with PCTM in Pittsburgh, PA. The PCSM conference will be held on Wednesday, November 4th at the Radisson Greentree. *Please note this is a change from previous years.* It will begin with a lunch followed by several key speakers including Linda Gojak (former President of the National Council of Supervisors of Mathematics), and Jim Bohan (Coordinator for the PA Standards Alignment System in Mathematics). A light reception will follow for an opportunity for members to mingle and get to know one another. Watch for further information posted on the website and included in the next newsletter.

I look forward to seeing everyone in November. 'Til then, have a wonderful summer!

Jane Wilburne
jmw41@psu.edu

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From the Editor

- Cathy Schloemer

Just a friendly reminder – as you plan to attend the PCSM this fall, please notice that November 4 is a *Wednesday*. This is a different from the past when we always had a Thursday meeting time. I hope you'll join us for what is sure to be a wonderful program!

Bad news – you might have missed Odd Day – 5/7/9, when three consecutive odd numbers made up the date. Just for the record, Odd Day comes only six times per century, and the most recent one was the middle one in this century. Now you'll have to wait until 7/9/11 to catch the next one! But do not fear: Gen Battisto brought to my attention that at 5 minutes, 6 seconds after 4 on July 8th it will be 04/05/06/07/08/09. So happy July 4 – and a very happy 04/05/06/07/08/09 too!

We will be planning to use listserv to send the newsletter electronically again this time, so watch your email. The links to articles are so much easier to use with just a handy click!

Board members - one of our “action items” from the fall meeting is for each board member to recruit 5 (FIVE) new PCSM members by June 30, 2009. Have you been recruiting?

And, Chris Czapleski, thank you again! I could not do this newsletter without your wonderful help!

Remember, this is your newsletter. What would you like us to share? Please send correspondence to me at:

Cathy G. Schloemer
P. O. Box 884
Indiana, PA 15701
724-465-7828
cschloemer@iasd.cc

PCSM AWARDS

As the end of another school year draws near, please take a moment to reflect about a mathematics education leader who is making a

difference in the work of teachers, students and/or other math educators. The PCSM constitution specifies that: “The Awards Committee, under the direction of the chairperson, shall canvas the membership for candidates for the following awards: Distinguished Service, Outstanding Contributions to PCSM, Outstanding Contributions to Supervision, Hall of Fame and Past President.” Since PCSM members are dispersed across the state, this newsletter serves as our best method of outreach.

Please take the time to submit nominations for one or more of the awards listed. A nomination form is included with this newsletter. Awards will be presented at the PCSM Annual Meeting in Pittsburgh on November 4, 2009.

Nominations are accepted at any time. To be eligible for receipt of awards at the November 2009 Annual Meeting, nominations must be submitted by September 15, 2009. Please be sure to use Gen Battisto's current e-mail, genb@ptd.net.



**THE NCTM REPRESENTATIVE'S
2009 REPORT**

Each year at the annual meeting of the National Council of Teachers of Mathematics (NCTM), representatives from the NCTM Affiliate Groups are invited to participate in Regional Caucuses and a Delegate Assembly. The Delegate Assembly is NCTM's formal structure for Affiliates to make recommendations about mathematics education issues or Council operational issues.

THE 2009 EASTERN REGIONAL CAUCUS

The Eastern Regional Caucus at the 2009 Annual Meeting of the NCTM in Washington, DC, provided an opportunity for delegates and alternates to meet informally to share information and to discuss proposed resolutions. Our Eastern Regional II representative Bill Barnes, from Baltimore, Maryland, and the Eastern Regional I representative Maria Diamantis, from Branford, Connecticut, co-facilitated the Eastern Regional Caucus Meeting on April 22, 2009. The NCTM Board of Directors members who attended our caucus were NCTM president Henry Kepner, past president Skip Fennell, and NCTM president-elect J. Michael Shaughnessy. The representatives/ alternates who attended from Pennsylvania included Mary Lou Metz and myself. [Although unable to attend the caucus, Janie Zimmer also attended the Delegate Assembly with us the following day.]

Following the welcome and introductions, the facilitators began to work their way through a lengthy checklist regarding MET affiliate grants, qualifications for the NCTM Affiliate Leadership Circle, recruitment of student affiliates, an NCTM publication award, and the like. When Bill Barnes called for resolutions, however, discussion veered off from the agenda. The topic of Achieve's Algebra II exam, which is supposed to be written by July 2009, excited an immediate and heated discussion. (Achieve is the governors' group involved with the national standards movement.) Emotions ran high as representatives asserted that Achieve had only ten people from the entire nation selecting problems for their exams and that two years and thousands of hours of work were ignored when a vocal parent group from New Jersey objected to chosen standards. There was some discussion that New Jersey "lifted" 238 standards from an Indiana state standards document from 2000-01, but that Indiana had already abandoned these standards as inadequate at the time New Jersey "lifted" them. This intense discussion was quelled with reassurances that NCTM is responding to the national standards movements [see "Snippets" in this newsletter], that state supervisors had met with Achieve on April 20, and that our NCTM president-elect will be meeting with the U. S. Secretary of Education.

As a part of the Achieve discussion, Neil Cooperman (NJ), who will be our Eastern representative replacing Bill Barnes next year, proposed a resolution regarding NCTM's position on assessment. Ultimately, however, we settled on a resolution, detailed in the following report on the Delegate Assembly, advocating new fee structures for students attending national conferences.

After all of this, Bill Barnes invited the representatives

and alternates to introduce ourselves and tell why we are passionate about mathematics education. It was interesting to hear the variety of reasons that people have devoted their lives to mathematics education.

THE 2009 NCTM DELEGATE ASSEMBLY

Affiliate delegates gathered Thursday, April 23, at the Grand Hyatt Washington Hotel for speeches and presentations, and to discuss a resolution about student conference fees. NCTM President Hank Kepner chartered a new Student Affiliate – our very own Indiana University of Pennsylvania Pre-service Teachers of Mathematics. He also recognized seven new members to the NCTM Affiliate Leadership Circle with a certificate for each group. NCTM Executive Director Jim Rubillo, known for his candy jokes, was presented a humorous token of appreciation (a basket of candy bars) for his work at the Council and his assistance to the Affiliate Services Committee. (Jim will be retiring at the end of July 2009.)

Hank Kepner then delivered his President's Report, discussing such strategic priorities as curriculum, equity, linking research and practice, professional growth and leadership, and advocacy. He particularly pointed out the K-8 *Focal Points* document and its possible role in the current "national curriculum" discussion. Additional NCTM grade-band and grade-level books, pre-K through 12, will follow. NCTM is also creating e-workshops to help high school teachers use the guidebooks in Algebra, Geometry, and Data Analysis and Probability, coming out in fall 2009.

After Kepner's report, Suzanne Mitchell presided over the session. The following resolution, proposed by our Eastern Regional Caucus, was presented to the assembly, voted on, and passed by the delegates:

Resolution (passed)

Be it resolved that the Delegate Assembly recommends to the NCTM Board of Directors that there be established new reduced-rate one-day registration categories for the Annual Meeting and Exposition and regional conferences for student members and student non-members.

This was my second experience as a delegate. It is interesting to be a member of the legislative process for NCTM, and I thank PCSM for providing me with this opportunity to serve our Affiliate in this capacity.

Respectfully submitted by
Cathy Schloemer
Acting NCTM Representative for PCSM

Snippets: News You Can Use

(1) Algebra in Grade 1?

From The Oregonian [Portland, OR], Sunday, December 28, 2008. See http://www.oregonlive.com/news/index.ssf/2008/12/math_education.html

Can first graders do algebra? In Lebanon, Oregon, teachers can and do teach young students algebra, and the students say they enjoy it. Standardized test scores are also improving with the new approach, which is based on Cognitively Guided Instruction.

(2) Public School Students Outperform Private

URL:
<http://news.illinois.edu/news/09/0225math.html>

This study of over 270,000 students from over 10,000 schools indicates that students in public schools are outperforming their counterparts in private schools on the mathematics NAEP. The article cited teacher certification and “a modern, reform-oriented math curriculum” as likely reasons for the disparity in performance.

(3) Craving Chocolate?

URL:
<http://www.northumbria.ac.uk/browse/ne/uninews/1127821>

Chocolate drinks with high levels of cocoa flavanols significantly improve mental performance and reduce fatigue. (We may need to budget for chocolate treats during our next PSSA tests! - *Ed.*)

(4) NCLB and School Restructuring

<http://epicpolicy.org/newsletter/2009/04/nclb%25E2%2580%2599s-%25E2%2580%259Cschool-restructuring%25E2%2580%259D-won%25E2%2580%2599t-raise-achievement>

William Mathis argues that school restructuring in response to poor performance on NCLB tests is not the key to improved performance. Instead, he recommends research-supported changes such as a

longer school day or school year, smaller learning communities, early education, and the like.

(5) Algebra for All by Grade 9

<http://www.edweek.org/login.html?source=http://www.edweek.org/ew/articles/2009/03/11/24algebra.h28.html&destination=http://www.edweek.org/ew/articles/2009/03/11/24algebra.h28.html&levelId=1000>

A study of 160,000 Chicago students found that requiring Algebra by grade 9 had some unintended effects such as increasing math failure rates - without a significant increase in math achievement scores or sizable increases in student enrollment in higher-level math classes. The article offers possible explanations for these outcomes.

(5) More about Chicago Students' Algebra

<http://www.edweek.org/login.html?source=http://www.edweek.org/ew/articles/2009/04/16/29algebra.h28.html&destination=http://www.edweek.org/ew/articles/2009/04/16/29algebra.h28.html&levelId=1000>

In an effort to improve Chicago students' performance in ninth-grade Algebra, students who had performed poorly in eighth grade were assigned to double periods of ninth-grade Algebra each day. Most students' test scores rose, but the performance among the lowest-achieving students was not appreciably improved. Failure rates remained about the same under the “double-dose” policy.

Another interesting result is that, with students in essence “tracked” into higher and lower groups, students in the higher groups improved their test scores as well, but also experienced higher failure rates. In other words, they learned more but received lower grades. Most likely, teachers increased expectations for the higher-achieving students when the lower achievers were removed from those classes. The lower achievers, however, also learned more in the double-period classes that were more tailored to their needs.

(6) "Reflections on Mathematics Teaching and How to Improve It"--Presentation by Jim Stigler

Source: California Commission on Teacher Credentialing (CCTC)

URL (Meeting Agenda):

<http://www.ctc.ca.gov/commission/agendas/2009-04/2009-04-agenda.html>

URL (Agenda Item):

<http://www.ctc.ca.gov/commission/agendas/2009-04/2009-04-11.pdf>

Stigler comes to some conclusions here that we do not often see or hear in education circles. He repeats his comment from *The Teaching Gap* that teaching is a cultural activity that is very difficult to change after students have learned a model of teaching through thirteen years in classrooms. More interesting, though, is that he remarks that there is no one best way to teach – that teaching consists, not of a set of skills and strategies, but of creating “opportunities for students to achieve important learning goals.” For students to understand mathematics, he notes that they specifically need to make connections and they need to *struggle*. How often do we provide these opportunities? How often do teachers have the chance to learn *how* to provide these opportunities?

See: COMET 10 (12) - 9 May 2009

(7) National Math Curriculum?

You may have caught one or more recent news reports about a national mathematics curriculum or “common core standards” that 46 states plan to work toward. June 2, 2009, NCTM released *Guiding Principles for Mathematics Curriculum and Assessment* in this regard. Read this short document at

<http://www.nctm.org/standards/content.aspx?id=23273>

(8) Math and the City

<http://judson.blogs.nytimes.com/2009/05/19/math-and-the-city/?emc=eta1>

Sometimes people come up with some truly weird and amazing observations. Here is one from this article:

“[I]f you tabulate the biggest cities in a given country and rank them according to their populations, the largest city is always about twice as big as the second largest, and three times as big as the third largest, and so on. In other words, the population of a city is, to a good approximation, inversely proportional to its rank. Why this should be true, no one knows.”

If that was not enough to whet your mathematical appetite, how about:

“[I]f one city is 10 times as populous as another one, does it need 10 times as many gas stations? No. Bigger cities have more gas stations than smaller ones (of course), but not nearly in direct proportion to their size. The number of gas stations grows only in proportion to the 0.77 power of population. The crucial thing is that 0.77 is less than 1. This implies that the bigger a city is, the fewer gas stations it has per person. Put simply, bigger cities enjoy economies of scale. In this sense, bigger is greener.”

Short of reproducing the entire article here, I just want to say *read this article*. In addition to the above, it shows fascinating connections between the mathematics of cities and the mathematics of living creatures that will warm your mathematical heart and give you nifty examples to use in your classrooms – I promise! – *Ed*.

Upcoming Conferences and Events:

PCSM Annual Conference

November 4, 2009

Radisson Hotel (Greentree)

Pittsburgh, PA

More info at <http://pcsmonline.org>

PCTM 58th Annual Conference

November 4-6, 2009

Radisson Hotel (Greentree)

Pittsburgh, PA

For more information visit: www.pctm.org.

NCSM Leadership Academy

July 14-17, 2009

Zermatt Resort & Spa

784 West Resort Drive

Midway, UT 84049

For Reservations: 866-348-7119

Identity yourself as an NCSM Academy Attendee

www.zermattresort.com

Deadline to mail the Midway registration form and fees is June 24, 2009.

They will do their best to accommodate registrations received after this date on a space-available basis and with a \$25 late charge.

NCTM Annual Conference

April 21-24, 2010
San Diego, CA

(NCTM Regional meetings this fall:

October 21–23, 2009

Boston, MA

November 4–6, 2009

Minneapolis, MN

November 18–20, 2009

Nashville, TN)

More info at www.nctm.org/meetings/

Electronic Workshop:

Tools for Building Math Concepts

<http://mathforum.org/toolsandconcepts/>

Explore how technology can help students develop fundamental concepts of multiplication, fractions, division and area through the process of generating data and examining patterns in this online workshop from the Math Forum @ Drexel.

Drawing on the benefits of software tools and the strength of human pattern recognition, we will explore ways to address misconceptions and related difficulties that students often run into (e.g., multiplication makes bigger, division

makes smaller, comparing unlike terms, confusing area and perimeter).

Program Features:

- Use online collaborative learning tools and the extensive resources and experience of the Math Forum community.
- Experience the flexibility of anytime, anywhere online learning.
- Become accustomed to an online professional development environment.
- Earn 1.5 Continuing Education credits (fifteen contact hours) from Drexel University.
- The workshop fee of \$50 includes a \$25 discount applicable to any of our online PD courses.

Workshop will be offered:

- July 9 - August 20

Register online:

<http://mathforum.org/pd/tac/register.html>

Source: Math Forum Internet News 14.20 (15 May 2009)

Realistic Mathematics Education Conference

University of Colorado at Boulder

October 12 - 14, 2009

We cordially invite you to join us October 12 - 14, 2009, in Boulder, Colorado, for the Second Realistic Mathematics Education Conference, held at the University Memorial Center situated on campus in the scenic foothills of the Rocky Mountains. This three-day conference is sponsored by the University of Colorado School

of Education and the Freudenthal Institute USA.

Realistic Mathematics Education (RME), widely respected throughout the world as an exemplary approach to mathematics education, is a Dutch approach to design of curriculum, assessment and instruction that has evolved over the last 30 years out of the work of Hans Freudenthal and research faculty at the Freudenthal Institute.

Who Should Attend?

The conference will serve an audience with various roles and interests in mathematics education. The program is organized to address the needs of lead teachers and professional developers; district, state or regional administrators; and university faculty who are engaged in research in mathematics education and/or teach pre-service courses. The content addressed in this 3-day conference ranges from early elementary to secondary level mathematics.

Conference Program

The 2009 RME conference will focus on the principle of progressive formalization, which has been noted in *How People Learn* as a promising approach to mathematics education. Building on thematic strands from the 2005 RME conference in Madison, plenary and interactive breakout sessions will explore more specifically how progressive formalization informs applications in ways that engage the mathematical reasoning of all learners, and support the development and use of formative assessment. The program will include keynote speakers Marja van den Heuvel-Panhuizen, Jan de Lange, and Henk van der Kooij, and include presentations by Mieke Abels, Peter Boon, Truus Dekker, Frans van Galen, and Willem Uittenbogaard.

Registration

The Conference registration page is:

<http://cucs.colorado.edu/confreg/rme2009.html>

Registrations received by the pre-enrollment deadline of July 15th are required to submit a conference fee of \$295. After July 15th, the standard registration fee is \$350.

Conference registration fee covers materials, continental breakfast, lunch, snacks, and one dinner at the University Stadium Club. The registration fee does not cover transportation, lodging, parking, and other meals. Participants are responsible for their own travel expenses.

Enrollment for this conference is limited and registration may close early, so please pre-register as soon as possible.

Lodging

Participants must arrange for their own travel and lodging. Because of its proximity to the campus and conference, a block of rooms has been reserved for conference participants at the: Millennium Harvest House Boulder
1345 28th Street
Boulder, CO 80302
Phone: (303) 443 -3850
<http://www.millenniumhotels.com/millenniumboulder/index.html>

Guests may call (800) 545-6285 or (303) 443-3850 and ask for the Reservations Department. Guests may also send e-mail reservations to millboulderres@mill-usa.com

When making hotel arrangements online, refer to the group conference code "CU - School Of Education RME Conference" to receive the reduced conference rate:

Single	\$114/night
Double	\$114/night
Triple	\$124/night
Quad	\$134/night

Confirmation

Upon receiving registration, the program committee will send a confirmation email within 48 hours that includes general conference information. Additional information and updates will also be emailed and posted to the conference website.

Conference Website

A website with an online registration option, conference updates, and links to research literature in Realistic Mathematics Education will be available later this summer, in conjunction with the posting of a second announcement.

Questions

Please direct any conference related inquiries to David Webb at fius@colorado.edu



ELECTRONIC RESOURCES

Paper Models of Polyhedra

<http://www.korthalsaltes.com/>

Gijs Korthals Altes offers these free models of polyhedra: print them on heavy paper, fold as instructed, and glue some edges. Some models are decorated, or have colored faces (if you have a color printer). The site is also available in Spanish and Chinese.

Construction tips:

<http://www.korthalsaltes.com/instructions.htm>

Models include:

- Platonic Solids
- Archimedean Solids
- Kepler-Poinsot Polyhedra

- Other Uniform Polyhedra
- Compounds
- Pyramids
- Other Polyhedra
- Prisms and Antiprisms
- Kaleidocycles
- Other Paper Models

Source: Math Forum Internet News, No. 14.5 (30 Jan. 09)

Making Algebra Easier

Archived Webinar: Making Algebra Easier

Source: *Education Week*

URL: <http://tinyurl.com/d9lpqm>

Education Week's February 10 webinar, "Why Students Struggle With Algebra and How Schools Are Helping," has been archived and will be available at <http://tinyurl.com/d9lpqm> until August 11, 2009. Audio and presentation files are both available.

This webinar brought together experts who have examined students' experiences with algebra. One of the goals was to explore the fundamental question: Why do so many students find algebra so difficult? The webinar examined efforts by districts and private curriculum developers to help these students. It also touched on major developments at the national level in this area, such as the release last year of the National Mathematics Advisory Panel report, which called for more coherent math curricula at early grades as a foundation for algebra.

Source: COMET 10(4) - 12 February 2009

Online Math Tutorials

<http://www.khanacademy.org/>

If you or your students need access to free math tutorials

on a wide variety of topics, try this site. I sampled tutorials on beginning derivatives and radians and degrees and found them well-paced, focused, brief, and clear. All videos are kept to ten minutes. These clips could be especially helpful to students who need to "hear it again,"

who miss class, or who are studying independently.

Danica McKellar

<http://www.danicamckellar.com/>

Danica McKellar, actress from *The Wonder Years* and *The West Wing*, is also a math fan and author. She has written *Math Doesn't Suck: How to Survive Middle School Math without Losing Your Mind or Breaking a Nail*. She has a new book out since then, called *Kiss My Math: Showing Pre-Algebra Who's Boss*.

- Read about Danica's acting career and life in mathematics.
- Send email to Danica, or participate in a forum where she also posts.
- See recent interviews, and look for upcoming book signing events in your area.

Source: Math Internet Forum News No. 14.14 (3 Apr 09)

National Math Panel Report: On-Line Chat Transcript

**"Does the National Math Panel's Report Add Up?"--
Transcript of Live Chat**

Source: *Education Week*

URL:

<http://www.edweek.org/ew/events/chats/2009/05/05/>

The National Math Panel, a White House-commissioned task force, has called for a new, streamlined teaching approach for early-grades math to better prepare students for algebra. The panel's report calls for more focus on whole numbers, fractions, and geometry, but it also makes broader suggestions about the work that parents, teachers, and others can do to encourage young students' learning of math. The recommendations made a big splash among educators, but critics say the math strategies outlined by the panel are too narrow.

A transcript of this live online chat with two former National Math Panel members is available at <http://www.edweek.org/ew/events/chats/2009/05/05/> (click "Replay")

Guests (two former National Math Panel members):

- **Francis M. (Skip) Fennell** -- Professor of education at McDaniel College.

- **Vern Williams** -- Math teacher at Longfellow Middle School, in Falls Church, VA

Source: COMET 10(14) 3 June 2009

NOTE THE CHANGE - AND MARK YOUR CALENDARS NOW!

The PCSM Annual Conference will be on **Wednesday** afternoon and Thursday morning this year. Please note the change! We will begin with a **luncheon on Wednesday**, November 4, 2009 and conclude with a breakfast on Thursday, November 5. In between there will be many exciting and meaningful activities. Meet with others who share your concerns and duties, and participate in some stimulating sessions. Check the PCSM website at www.pcsmonline.org for further developments.

Hope to see you at the Radisson Greentree in Pittsburgh on November 4, 2009!

- Janie Zimmer



**Planning ahead?
The NCTM Annual is in Philadelphia,
April 25-28, 2012.
Be there or B^2 !**