Mathachusetts

Official Newsletter of MassMATE

Massachusetts Mathematics Association of Teacher Educators

Message from the President and President Elect: Jenny Tsankova & Polina Sabinin

While we wait …

As we are waiting for the new policy on education to unfold and reveal its day-to-day impact, we coach, we mentor, we motivate, we teach and learn mathematics. While waiting for the DESE to review and improve the Mathematics Frameworks, we learn and implement the existing frameworks, we AOP (aligned our programs), and make them work to the best of our knowledge and understanding. While waiting for MCAS to come and go, we squeeze in logic problems and games, we lead the math team, we encourage teachers to do a beloved math project, we don't forget the invigorating math family night, and of course, we sign up for PD during our vacation and attend conferences to get rejuvenated again and again.

It occurs to us that this state is not what others may describe as "waiting." Rather, we engage in a course of active anticipation. We act upon our beliefs and understanding about what best practices in mathematics education look like. We experiment, we open the doors for new initiatives, we fall in love with fresh ideas, strategies, activities, and we ache to implement them right away. We are not inert. Rather, we stimulate, support, and make changes possible, and we bring them to fruition … and we accomplish all of that while "waiting."

As we approach the end of this school year, we are already keeping an eye on the things to come locally and nationally. What will be the concrete effects of the National Mathematics Panel Report? How will the Obama administration policies and funding decisions impact education in Massachusetts schools and colleges? What will be the final form of the new DESE frameworks? What direction will the conversations about the national curriculum or frameworks take? What will be the final NCTM High school curriculum frameworks? How will the new MTEL regulations affect our pre-service programs? There are no answers to these questions, just speculations, hopes, and … waiting.

While we keep an eye on what's to come, for the sake of the students in our classrooms today and tomorrow, let's not let our current initiatives, projects, and ideas lose momentum. As educators we are experts at multi-tasking, but staying on top of new research, policies, and curricula is not a piece of cake (or should I say "a piece of Pi"?). Regardless of how expert we are, we cannot do this alone! We need support from our peers. This is what we had in mind when we came up with the idea of MassMATE. Now, after three years of existence, two wonderfully successful Symposia, and as we are approaching 100 members, we want you to get involved in shaping this organization and make it exactly what you need it to be. MassMATE is working hard to bring everyone together for another Symposium with opportunities to hear from experts in professional development and brainstorm with peers. We hope that you are able to join us on June 9th in Bristol, RI … and while you are "waiting" for the exciting 2010 MassMATE Symposium, we invite you to get involved with MassMATE in ways that suite your "waiting style"; anything from volunteering on the day of the Symposium to running for a position on the Board.

We sign off with a reminder … "it's all about the kids!"

Visit us at our on-line home!
www.MassMATE.net

MassMATE

Massachusetts Mathematics Association of
Teacher Educators

and

Roger Williams University
Learning to Bridge the World
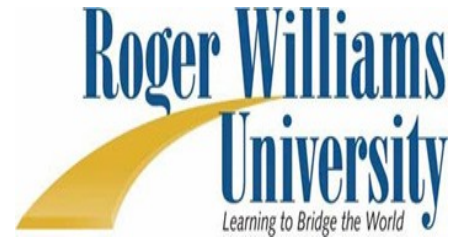
Effective Models of Professional Development
Symposium and Luncheon
June 9, 2009 at 8:30 a.m. - 3:30 p.m.
Bay Point Conference Center – Roger Williams University – Bristol, RI

Please join us! We are planning an exciting conference,
with informative sessions, exhibitors, a great keynote speaker,
and time to network with other teacher educators and leaders.
Bring a colleague.

Conference Cost: $40 ($50 after May 25, 2009)
includes an annual membership in MassMATE or a year's membership extension.
Attendees will be treated to a continental breakfast and lunch,
courtesy of Roger Williams University.

To register: please go to the MassMATE website www.MassMATE.net.

Overnight Accommodations: Available for $99/night for single or double
occupancy at Bay Point Residence & Conference Center, 144 Anthony
Rd.,Portsmouth, RI 02871   Phone: 401-683-3600.
Mention the MassMATE conference when you register to get the conference rate.

Symposium Schedule

Time	Activity
8:00 – 9:00	Registration, Breakfast, and Exhibits
9:00 – 10:20	Welcome and Keynote Speaker
10:30 – 12:00	Sessions
12:00 – 1:30	Lunch, Networking, and Exhibits
1:30 – 3:00	Sessions
3:10 – 3:30	Final Comments

For more information: please go to our website or contact
Stan Dick (ssdick@comcast.net) or Paula Sennett (Paulasennett@aol.com)

Effective Models of Professional Development
Symposium and Luncheon
Session Descriptions

Keynote Speaker:

Jim Matthews - *Siena College, Loudonville, New York*
Professional Development and Excellent Teaching So That No Mathematics Teacher is Left Behind

Morning Sessions:

Kevin Sawyer - *Silver Lake Regional School District*
Professional Development that Supports the Transition from a Teacher Centered Classroom to a Student Centered Classroom
(6 – 12)

Anne Collins - *Lesley University*
What Constitutes Effective Professional Development?
(K – 8)

Jayne Lynch & Steve Yurek - *Lesley University*
Programs to Strengthen Content Knowledge
(K – 6 and Higher Ed)

Afternoon Sessions:

Sherry Sajdak - Boston Public Schools
Professional Development Grounded in Cases of Student Thinking – An Example from Developing Mathematical Ideas
(K – 8)

Amy Morse – Education Development Center
Cultivating a Math Coaching Practice - Exploring Professional Development for Coaching and the Mathematics Leadership Program
(K – 12)

Cristina Heffernan & Neil Heffernan - Worcester Polytechnic Institute
Developing Professional Learning Communities around looking at formative assessments delivered on an online computer tutor.
(K – Higher Ed)

Upcoming Conferences:

- **MassMATE Symposium**
  Effective Models of Professional Development
  June 9, 2009
  Bristol, RI
  www.MassMATE.net

- **MAA MathFest!**
  Mathematics Association of America
  August 6–8, 2009
  Portland, OR
  www.MAA.org

- **NCTM Regional Meeting & Exposition**
  National Council of Teachers of Mathematics
  October 21–23,2009
  Boston, MA
  www.NCTM.org/regionals.aspx

- **AMATYC Annual Conference**
  American Association of Two Year Colleges
  November 12–15, 2009
  Las Vegas, NV
  www.AMATYC.org

- **AMTE Annual Conference**
  Association of Mathematics Teacher Educators
  January 28–30, 2010
  Irvine, CA
  www.AMTE.net

- **AERA Annual Meeting**
  American Educational Research Association
  April 30–May 4,2010
  Denver, CO
  www.AERA.net

- **NCSM Annual Meeting**
  National Council of Supervisors of Mathematics
  April 19–21, 2010
  San Diego, CA
  www.MathEdLeadership.org

- **NCTM Annual Meeting & Exposition**
  National Council of Teachers of Mathematics
  April 21–24, 2010
  San Diego, CA
  www.NCTM.org/meetings

- **T³ International Conference**
  Teachers Teaching with Technology™ (T^{3}™)
  March 5-7, 2010
  Atlanta, GA
  www.education.ti.com

- **ATE's Summer Conference**
  Association of Teacher Educators
  August 1-5, 2009.
  Reno, NV
  www.ATE1.org

Current Calls for Proposals:

- June 1, 2009—Speaker proposal
  ATE 2010 Annual Meeting
  www.ATE1.org/

- June 15, 2009—speaker proposal
  NCSM 2010 Annual Meeting
  National Council of Supervisors of Mathematics
  http://www.speakerready.com/abstracts/NCSM/

- July 15, 2009—speaker proposal
  AERA 2010 Annual meeting
  American Educational Research Association
  www.AERA.net

- November 1, 2009 —speaker proposal
  2010 Regional NCTM meetings and expositions
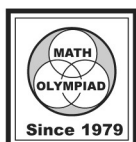 www.NCTM.org/conferences

A New resource!

In April, 2009 the NCTM published two new books, *Empowering the Mentor of the Beginning Mathematics Teacher* (ISBN 978-0-87353-620-2) and *Empowering the Mentor of the Experienced Math Teacher* (ISBN 978-0-87353-624-0). These are informative and practical resources where mentors and mentees share their experiences and advice with those who plan to mentor other mathematics teachers. You can find more about these books at www.nctm.org/catalog.

Getting involved in MassMATE

Board of Directors Call for Nominations

Show your commitment to the value of Mathematics Teacher Education and help to shape our organization's future! This year we will elect two Board members-at-large. You may nominate yourself or someone else. Nominating candidates for office is a valuable service to MassMATE and your thoughtful participation in this process will be greatly appreciated.

Board elections will take place on June 9, 2009 at the MassMATE Symposium.

Go to www.MassMATE.net before June 1, 2009 to submit your interest in running for a position on the Board or to nominate a fellow mathematics teacher educator.

E-mail Polina@Sabinin.info if you have any questions about the nominations or board responsibilities.
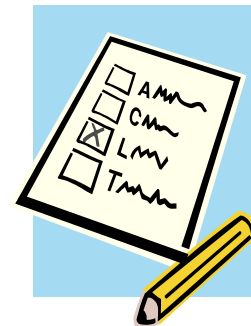
## Contribute to *Mathachusetts*

We value our member's thoughts and contributions! Please consider writing an article for *Mathachusetts*.

Also, let us know of any noteworthy events, projects, or programs occurring in your district or school, so that we may consider including it in *Mathachusetts* or on our website!

Please contact Polina Sabinin at Polina@Sabinin.info with your submissions.

Exhibiting at the MassMATE 2009 Symposium

For the first time this year, MassMATE would like to invite companies intimately involved with Mathematics Teacher Education to join the symposium as exhibitors. There will be room for a limited number of exhibitor tables, and time set aside for attendees to browse the exhibits.
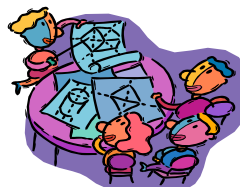
All companies or individuals who are interested in this opportunity and would like to find out about fees and conditions, are asked to contact Polina Sabinin at polina@sabinin.info.

Advertising in *Mathachusetts*

Mathachusetts will be publishing advertisements related to Mathematics Education. For more information, formats, fee schedules, and to obtain an application, please contact Polina Sabinin, the newsletter chairperson at Polina@Sabinin.info.

Please note that by publishing an advertisement, MassMATE does not imply endorsement of the advertised product or the company.

Some Mathematical Teasers

A new book by Avi Ornstein includes some fun problems designed to stretch your thinking. According to AEG Publishing, "Increase Your Brain Power is an ingenious collection of over 400 brain building puzzles. Each unique puzzle is designed to exercise and expand the mind and thought patterns in a remarkable and sustaining way".

You can find more of Avi's problems in his book "Increase Your Brain Power" published by Strategic Book Publishing (ISBN 978-1-60693-363-3).

Enjoy!

1) When can you add 8 to 9 and get 5 as a correct answer?

2) An interesting oddity in math arises from the factual equation $45^2 = 2025$. If each digit, other than the exponent, is increased by 1, we get $56^2 = 3136$, which is also true. The challenge is to find an equation of a square of a two-digit number that produces another true equation when every digit, other than the exponent, is increased by 3.

3) Start with two things that are equal and express this as: $A = B$

Square both sides of the equation: $A^2 = B^2$

Multiply each side by A^2: $A^4 = A^2B^2$

Add A^4 to each side: $2A^4 = A^4 + A^2B^2$

Subtract A^2B^2 from each side: $2A^4 - A^2B^2 = A^4$

Factor each side: $(2A^2 + B^2)(A^2 - B^2) = (A^2 + B^2)(A^2 - B^2)$

Factor out A^2-B^2 from each side: $2A^2 + B^2 = A^2 + B^2$

Substitute B for A (since they are equal): $2B^2 + B^2 = B^2 + B^2$

Simplify: $3B^2 = 2B^2$

Divide both sides by B^2: $3 = 2$

We have now proven that three and two are equal! Where did we make a mathematical error?

Answers are on Page 6.

Summer Professional Development Opportunities

FREE Summer Courses: Registration begins for MA DESE Summer Institutes

Once again, the Massachusetts Department of Elementary and Secondary Education is funding summer institutes for teachers. These are courses that are offered free of charge, with an option of paying for graduate credits. Institutes involve mostly summer hours, with some follow-up work in the fall. Upon completion, 67.5 PDP's will be awarded to all participants.

This year, 13 of the institutes offered are in the area of Mathematics. The topics include understanding geometry, algebra, coaching, assessment in the mathematics classroom, and much more.

New this year is an on-line component to the courses. Some of the institutes are hybrid courses, where the course is a combination of face-to-face instruction and on-line instruction.

Priority in enrollment is given to those teachers working in high-needs district. Courses fill quickly, so it is recommended that interested teachers register as soon as possible.

As a teacher educator, this is a wonderful opportunity for you to announce. For more information and to register, go to: http://www.doe.mass.edu/frameworks/cinstitute/09/.

Answers to Mathematical Teasers

1) 8 + 9 = 5 in modular 12 math. Modular 12 math only has the numbers 1 to 12. After 12, you are back to 1. You are using modular 12 math whenever you read a clock. If you start a job at 8 in the morning and work for 9 hours, you will be finished at 5.
2) Let A be the 2-digit number and N be its square. Then A^2 = N. If each digit is increased by adding 3, then $(A + 33)^2$ = N + 3333. This expands to $A^2 + 66A + 1089$ = N + 3333 and substitution changes it to $A^2 + 66A + 1089 = A^2 + 3333$. This simplifies (by removing A^2 from each side and dividing through by 11) to 6A + 99 = 303. Subtracting 99 from each side and dividing by 6 gives A = 34.
Sure enough, 34^2 = 1156 and 67^2 = 4489!
3) Since A =B, $A^2 - B^2$ = 0. When we factored out $A^2 - B^2$, we were breaking a cardinal rule of math. Dividing by zero made all subsequent results invalid.

Join us at the John B. Hynes Veterans Memorial Convention Center and the Sheraton Boston Hotel for the 2009 Boston Regional Conference and Exposition.
Registration is now open!
Online Planner Now Available

Why Attend?

- Experience a wide variety of sessions and in-depth gallery workshops
- Gain new ideas for teaching or research
- Save 25% off educational materials in the NCTM Bookstore
- Review and compare products in the Exhibit Hall
- Network and make new contacts
- Receive intensive professional development and inspiration in two productive days

Who Attends?

- Classroom teachers at all levels
- Administrators
- Teacher educators
- Mathematics supervisors
- Department chairs
- Mathematics specialists
- Curriculum planners
- and others

Volunteering in Boston!
It's a great way to network!

Volunteering in the Boston NCTM Regional Conference and Exposition is a rewarding experience, providing you with opportunities to network and connect with others in your field as well as make new friends. The Boston Local Arrangements Committee is recruiting volunteers who would be able to assist with meeting rooms and distribution of conference updates.

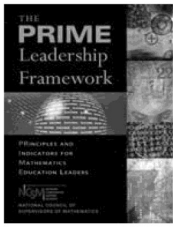For more information visit www.nctm.org/meetings.

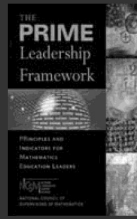## More Exciting NCSM Learning Opportunities

NCSM's Newest Leadership Academy!

STOMPING ON THE GAP

June 15-18, 2009   Indianapolis, IN

July 14-17, 2009   Midway, UT

PRIME Leadership at Work!™

NCSM Annual Fall Leadership Seminars

Be Inspired. Be Motivated. Be Prepared.

Why attend the fall one-day seminar events? The presentation and the passion!

You will be energized by the passion and contagious enthusiasm of the presenters—Diane Briars and Tim Kanold. They will unfold the complex actions of mathematics education leaders and help you to answer the question: "What does an effective mathematics leader need to know and do?"

Meet your hosts:

You Will Learn How To:
- Use research-informed strategies for equity and excellence
- Passionately pursue levels of coherent rigor and equity in the work of all teachers
- Build a professional learning community of adults
- Use skills that will lead to adult actions guaranteed to improve student achievement in your school mathematics programs
- Implement highly effective informative assessments

Diane Briars, NCSM President

Diane Briars, Ph.D., is President of NCSM and Co-Director of the Algebra Intensification Project, a joint venture of the Learning Science Research Institute, University of Illinois at Chicago and the Dana Center, University of Texas at Austin. Previously, she was Mathematics Director for the Pittsburgh Public Schools. She has served as a member of many national committees, including the National Commission on Mathematics and Science Teaching for the 21st Century, headed by Senator John Glenn. A talented and motivational speaker, Diane has served in leadership roles for NCTM, The College Board, and the National Science Foundation.

Tim Kanold, NCSM Immediate Past President

Tim Kanold, Ph.D., is the immediate Past President for NCSM and currently serves the NCSM Board as the Director of the Summer Leadership Academies as well. Tim is the CEO and founder of E^2-PLC Learning—a professional development company that serves mostly urban districts. Previously, Tim served for 21 years as the Director of Mathematics and Science and then as Superintendent of Adlai E. Stevenson High School District 125 in the Chicago area. A motivational and insightful leader, Tim provides practical solutions to the complex issues faced by mathematics education leaders today.

Register Today!
303-758-9611 or www.mathedleadership.org

Boston, MA
October 21, 2009

2009 Annual Fall Leadership Seminar Agenda
One Day • Prior to the NCTM Regional Meetings

Time	Session
7:00-8:00	Registration and continental breakfast
8:00-9:15	Diane Briars *The Teachable Voice of the School Mathematics Leader and Coach—How Research Should and Does Inform Our Leadership Practice!*
9:15-10:30	Tim Kanold *The Pressure and Support of the School Mathematics Leader and Coach—How Do We Erase Inequities in Student Learning? (Part 1)*
10:30-10:45	Break
10:45-12:00	Tim Kanold & Diane Briars *The Pressure and Support of the School Mathematics Leader and Coach—How Do We Erase Inequities in Student Learning? (Part 2)*
12:00-1:00	Lunch sponsored by America's Choice
1:00-2:30	Diane Briars *The Energy Focus of Teacher Leadership Actions—What Really Matters in Curriculum, Teaching and Learning?*
2:30-3:45	Tim Kanold *The Energy Focus of Teacher Leadership Actions—What Really Matters in Assessment?*
3:45-4:00	*Next Steps with You and with NCSM*

Board of Directors of MassMATE:

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Higher Ed Liaison:
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MassMATE's Purposes and Goals

The Massachusetts Mathematics Association of Teacher Educators (MassMATE) is a nonprofit organization whose purpose is to provide a forum for mathematics teacher educators to communicate with each other and collaborate with other groups interested in the teaching of mathematics in the state of Massachusetts. Specifically, the goals of MassMATE are to:

- promote **leadership** among mathematics teacher educators;
- serve as a **forum** for ideas and resources in mathematics teacher education;
- encourage **research** related to mathematics teacher education;
- promote quality **undergraduate** and **graduate** programs in mathematics education;
- encourage and support professional development programs for **in-service** teachers;
- encourage and support professional development programs for postsecondary **faculty** involved in mathematics education;
- facilitate **communication and collaboration** among **professionals** involved in mathematics education and mathematics teacher education at all levels;
- facilitate **communication and collaboration** among members of educational **administrative** units, such as departments of mathematics and departments of education;
- coordinate activities and work collaboratively with **other associations** and organizations concerned with the preparation and professional development of mathematics teachers;
- work cooperatively with the **federal and state** agencies to enhance the mathematical, pedagogical, and clinical **preparation of teachers** of mathematics at all levels with respect to criteria for credentialing and licensing teachers in Massachusetts.

Share these with a colleague and have them join MassMATE today!

Useful Links:

- Massachusetts Mathematics Association of Teacher Educators (MassMATE)
  www.MassMATE.net
- Association of Mathematics Teacher Educators (AMTE)
  www.AMTE.net
- Association of Teachers of Mathematics of New England (ATMNE)
  www.ATMNE.org
- Association of Teachers of Mathematics in Massachusetts (ATMIM)
  www.ATMIM.org
- National Council of Supervisors in Mathematics (NCSM)
  www.mathedleadership.org
- National Council of Teachers of Mathematics (NCTM)
  www.NCTM.org
- Massachusetts Department of Elementary and Secondary Education Professional Development
  www.doe.mass.edu/pd
- National Council on Teacher Quality (NCTQ)
  www.NCTQ.org
- MathForum
  www.MathForum.org