

April 17,
2012

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Teachers of Mathematics*

EIU Math Energy

Eastern Illinois University
Department of Mathematics
and Computer Science

Presents
The 55th Annual Conference
on the
Teaching of Mathematics



Innovations

Our Keynote Speaker:

Mike Byster,
creator of

BRAINETICS™

Summer Masters Degree Program

M.A. in Mathematics Education:

Secondary Option

Elementary/Middle Level Option

The Department of Mathematics and Computer Science is pleased to announce two options in our M.A. Mathematics (Mathematics Education) Master's Degree program.

The Secondary option is designed specifically for current and future secondary mathematics teachers. Coursework includes a mix of pure mathematics, mathematics education, and education philosophy.

The Elementary/Middle Level option is designed specifically for current and future elementary/middle level teachers. Coursework includes a blend of education, mathematics, and mathematics education.

Both options require 30-32 hours and can be completed in 3 to 4 summers.

For more information and application materials for either option, contact:

Marshall Lassak
Department of Mathematics and Computer Science
Phone: 217-581-6450
E-mail: mblassak@eiu.edu

You can also find more information on the web at the
Mathematics Education Web Page

<http://www.eiu.edu/~mathte>

Summer Graduate Assistantships are available!

55th Annual Conference on the Teaching of Mathematics

INNOVATIONS

Welcome to Your Conference

It is great having each of you INNOVATIVE teachers with us today. We have an exciting, innovative group of speakers throughout the conference. All grade levels are represented and each session will be conducted by top quality teachers. You are encouraged to use this conference to make connections with colleagues and new friends. We cannot teach our students the depth of understanding needed in this 21st Century without sharing our INNOVATIVE thoughts and techniques.

We are honored to have as our luncheon speaker today Mr. Mike Byster, founder of BRAINETICS™, who will share his unusual but practical way of teaching mathematics to children of any age. I know you will enjoy the conference from start to finish. Welcome!

Dr. Andrew M. White
Conference Chair

Conference Schedule

7:30 – 8:30 a.m.	Registration	Alumni Lounge
8:30 – 9:30 a.m.	Session 1	Third Floor, East Wing
9:30 – 9:40 a.m.	Break	
9:40 – 10:40 a.m.	Session 2	Third Floor, East Wing
10:40 – 10:50 a.m.	Break	
10:50 – 11:50 a.m.	Session 3	Third Floor, East Wing
Noon – 2:00 p.m.	Luncheon & Keynote Address	Grand Ballroom

General Information

The conference will be held on Tuesday, April 17, 2012, in the Martin Luther King, Jr. Student Union and will begin with registration at 7:30 a.m. in the Alumni Lounge outside the Grand Ballroom. After registering, participants are encouraged to network and enjoy the continental breakfast. The conference luncheon will begin at noon in the Grand Ballroom, followed by a keynote presentation. The conference will conclude at approximately 2 p.m.

Graduate Credit Option

Interested conference participants are eligible to earn one semester-hour of graduate college credit. Participants must pay applicable graduate admission and tuition fees (in addition to conference registration fee), attend all conference breakout workshops and the luncheon presentation, and complete additional coursework as assigned by Dr. Rick Anderson. To register or for more information on the graduate credit option, please contact the School of Continuing Education at (217) 581-5114. Please direct coursework-related questions to Dr. Anderson at (217) 581-5427 or e-mail rdanderson@eiu.edu.

Continuing Professional Development

Participants are eligible to earn up to four (4) Continuing Professional Development Units (CPDU's) for teacher re-certification. Participants must attend all workshop sessions and the conference luncheon presentation to earn four (4) CPDU's.

Registration

Registration fee for the conference is \$60, and includes all sessions, continental breakfast and the luncheon. Undergraduate preservice students may attend sessions only for \$10, luncheon meal ticket not included. To register, please complete and return the registration form inside the back cover by April 3, 2012 so that we may accurately plan for this conference. Meals will not be guaranteed for participants registering after April 3, 2012. Acknowledgement by e-mail will be sent for all registrations received by this date, and will include parking information and a campus map. Your conference packet and luncheon ticket may be picked up at the on-site registration desk when you arrive.

Participant Seating

To ensure that conference participants get the preferred seating their registration payment entitles them to, we are asking all participants to PRE-REGISTER for their preferred workshops. Use the designated space on the registration form at the back of this booklet to reserve your first and second choice workshops for each breakout session, using the corresponding workshop numbers in the booklet. Proof of your reservation will be provided in your conference packet, and can be used to verify your eligibility for preferred seating in your workshops. All workshop space will be issued on a first-come, first-served basis, so send your registration form as soon as possible!

2

Cancellation Policy

If you register and find that you cannot attend, a partial refund will be made if you cancel by April 3, 2012. If you are unable to attend, you may send a substitute. No refunds will be made after April 3, 2012.

3 Easy Ways to Register



Register online at:

www.eiu.edu/~adulsted/nc_math_conf.php.

We accept Visa/MasterCard/Discover/American Express.
Credit card payment required with
online registration.



Mail:

Mathematics Conference
School of Continuing Education
Office of Academic &
Professional Development
Eastern Illinois University
600 Lincoln Avenue
Charleston, IL 61920-3099



Phone:

(217) 581-5114
(A Purchase Order number or
credit card number is required for
phone/FAX registrations.)

Session I

8:30 9:30 a.m.

Grade Levels K–2

Oakland Room

1. Teaching Math Through Children’s Literature

Speaker: Teresa Truesdale, Riddle Elementary School, Mattoon

There are so many wonderful children’s books with an assortment of math themes. These books make great connections between prior knowledge and the classroom. Come get some great ideas to make math come alive for early childhood students!

Grade Levels K–5 and Preservice Teachers

Paris Room

2. Mathematics the Multisensory Way

Speaker: Catherine Spung, Chrisman Elementary School

Students who learn differently can greatly benefit from concrete representation strategies in mathematics. Learn about commercial and homemade manipulatives to improve student learning.

Grade Levels K–16 and Preservice Teachers

Arcola/Tuscola

3. An Overview of the Common Core Standards for Mathematics

Speaker: Marci Irwin, Regional Office of Education #11

An introduction of the Common Core Standards for Mathematics and their impact on classroom instructional practices. Get an overview of the development of the standards, and discuss curriculum changes; instructional needs; professional development needs; alignment of current school improvement and curriculum and what the anticipated support structures will look like.

Grade Levels 3–8

Greenup Room

4. Paper Strip Math: Hands-On Approach to Problem Solving

Speaker: Kyungsoon Jeon, Eastern Illinois University

I’ll share some nice ways of using simple paper strips in teaching various concepts in mathematics.

Grade Levels 6–12

Effingham Room

5. Increasing Student Engagement With Technology

Speaker: Jason Pound, Urbana Middle School

Participants will be shown a variety of tried computer applications and hardware that increase student engagement. See student work with Scratch, iMovie, Animation Creator™ HD, and participate in demonstrations with CBR™ Motion Sensors, Calculator Robots, CPST™ Response System, and Poll Everywhere.

Grade Levels 6–16 and Preservice Teachers

Charleston Room

6. Using Action Research to Improve Teaching: My Examination of Self-Regulation Strategy Modeling and Use

Speaker: Eric Bright, Charleston Middle School

This presentation will discuss the benefits and methodology of using action research to improve teaching and learning, as well as detail the findings from my own action research project examining students' use of self-regulation strategies. Come learn how you can make a “research” project manageable in your classroom or math department to ultimately help your students learn math better.

Grade Levels 9–12

Sullivan Room

7. A Field Trip to the Fourth Dimension

Speaker: Gene Bild, University Laboratory High School, Urbana

Using Edwin Abbott's novel *Flatland* and YouTube© videos as a launching pad, my sophomore Algebra 2 class spends a day or two in the fourth dimension. This lesson culminates in a paper, which many students have described as their favorite activity of the semester. Samples of student work will be displayed.

Grade Levels 9–12

Martinsville Room

8. Statistics Standards Aligned to the Common Core: Using the TI-83/84

Speaker: Clay Roan, Eastern Illinois University

This session will examine the Illinois Learning Standards aligned to the Common Core in the area of Statistics in grades 9-12. Instruction on using the TI-83/84 to guide classroom activities will be given. Bring your TI-83/84 or borrow one of ours.

Session II

9:40 10:40 a.m.

Grade Levels K–2

Sullivan Room

9. Immersing Common Core Standards

Using Early Numeracy Differentiated Workstations

*Speaker: Tina Johnson, Woodrow Wilson Elementary School,
Peoria #150*

This session will demonstrate how to engage students by “doing the math” using workstations that enhance number talk and address common core standards emphasizing numeracy. An overview of forming groups and tracking progress, designing a management board for groups using the workstations, choosing workstation materials that foster common core standards including number operations, base ten, and algebraic thinking, and tips for differentiating the workstations will be shared. Brief video clips demonstrating some workstations and some workstation tubs will be shown.

Grade Levels K–5

Martinsville Room

10. Early Algebra:

Connecting Algebraic Reasoning to Number Sense

Speaker: Peter Wiles, Eastern Illinois University

Early Algebra is not necessarily the same thing as “Algebra Early.” In this talk I will outline how we can begin to develop algebraic ideas for young children in ways that help them to develop their understandings of fundamental ideas in number and operation. I will particularly highlight how a focus on early algebraic thinking can effectively address both the common core content standards, as well as the standards for mathematical practice.

Grade Levels K–16 and Preservice Teachers

Effingham Room

11. Let’s Put Some Zip Into Your SMART board Lessons

Speaker: Shari Bruyn, Okaw Valley High School

Come see how to make your SMART board more than an electronic chalkboard. Let’s put some magic into your everyday lessons.

Grade Levels 3–8

Greenup Room

12. Don't Slow Me Down With That Calculator (Mental Math Methods)

Speaker: Cliff Petrak, Brother Rice High School (Retired)

Learn to master a multitude of little-known, super-shortcut computational techniques and strategies. You'll soon leave your calculator-dependent friends in the dust.

Grade Levels 6–8

Arcola/Tuscola

13. Middle School Math Games

Speaker: Rick Anderson, Eastern Illinois University

From 5-minute quick games to lesson-length games, students can develop and practice many ideas by playing whole-class and individual games. Several games will be shared and played.

Grade Levels 6–16 and Preservice Teachers

Paris Room

14. Teaching Mathematical Modeling Using GeoGebra

Speaker: Lingguo Bu, Southern Illinois University

GeoGebra is an open-source dynamic mathematic learning environment (www.geogebra.org). This session introduces basic features of GeoGebra and its implications for teaching mathematical modeling and problem solving in school mathematics.

Grade Levels 6–16 and Preservice Teachers

Charleston Room

15. Using Action Research to Improve Teaching: My Examination of Self-Regulation Strategy Modeling and Use

Speaker: Eric Bright, Charleston Middle School

The new Common Core Math Standards provide a unique opportunity to re-examine many of our commonly held teaching beliefs and practices. Come get an overview of the content standards, practice standards, PARCC test, expectations of the state, and currently available resources to help implement Common Core. Then we'll examine innovative ways to begin the implementation process in your district.

Grade Levels 9–12

Oakland Room

16. Using GeoGebra to Visualize and Discover Calculus

*Speakers: David Haas and Jacob Mohler,
Westminster Christian Academy*

This session will demonstrate the use of the free software program GeoGebra for helping students to visualize the derivative, discover derivative “shortcut” formulas, visualize the graphical relationships among a function and its first two derivatives, visualize Riemann Sums, discover integral functions, and discover the connections in each part of the Fundamental Theorem of Calculus.

Session III

10:50 11:50 a.m.

Grade Levels K–2

Greenup Room

17. Teaching Common Core Problem Solving in the Primary Classroom

Speaker: Rena Pate, Primary Math Rules

Model and teach Common Core Standards in Problem Solving in just minutes a day at no cost to you. Learn how to incorporate a system of problem solving strategies that you can begin using in your classroom tomorrow. Problems will move from simple to complex and multi-step. Students will love the real-life applications.

Grade Levels K–5 and Preservice Teachers

Paris Room

18. Take the Problem Out of Problem Solving

Speaker: Joan Henn, Eastern Illinois University

We will look at interesting activities and problems that you can give to your entire class and every child will be able to participate in a meaningful way.

19. Teaching With Illuminations

*Speaker: Craig Russell,
University of Illinois Laboratory High School*

NCTM's Illuminations project includes (free) lessons and activities for every grade level and for many math topics. See how easy it is to incorporate meaningful mathematics into your lesson planning!

20. Typesetting Mathematics on the Web

*Speaker: Rachel Tyson,
University of Illinois Laboratory High School*

While typesetting a mathematics test or worksheet has gotten easier over the years, having easy-to-edit and -view mathematics on the web can be a little trickier. Come see how to use Mathjax[®], CodeCogs[®] and other free internet resources to create beautifully typeset mathematics on the web that can be viewed through any browser regardless of the fonts on the computer used for viewing.

21. Exploiting Problem Potential to Meet the Common Core Standards

Speaker: Keith Drew, Judson University

With some relatively simple modifications, a common “book” problem can be adapted to incorporate a wide range of mathematical concepts and technologies. With other simple (but careful) changes, problems can be made applicable and accessible to students at a variety of grade and ability levels. And, it can all be linked to the Common Core Standards! We will spend our entire time developing one single problem, and you should leave this session with ideas to immediately implement in your own classroom.

22. Using Action Research to Improve Teaching: My Examination of Self-Regulation Strategy Modeling and Use

Speaker: Eric Bright, Charleston Middle School

This presentation will discuss the facts, myths and misconceptions about common grading practices. What role should extra credit play? How do we use completion grades? Should we really give zeros? What about homework? Does “standards based” grading give an accurate picture of mastery? Is using points different from using a weighted scale? Come and discuss all these questions and more.

23. Fascinating Figures

Speaker: George Marino, Aurora Central Catholic School

Imagine creating a new geometric figure. You can name it, draw it on a Dynamic Geometry System, make conjectures, test and prove them. You will encounter the full range of geometric activities.

24. Top 10 Things I Wish I’d Known...

Speaker: Cindy Myer, Robinson High School

After 18 years in the classroom, there are a few things I wish I’d known ‘back then.’ This session focuses on communication, classroom management, and first-year survival tips.

Luncheon Keynote Presentation

BRAINETICS™

Mike Byster, Brainetics creator

Noon

Grand Ballroom

Mike Byster, a true “walking calculator,” will display his amazing abilities doing, for instance, multi-digit division. More importantly, Mike will teach you how you can do it too! The skills Mike invented and teaches empower minds using mathematical tools as a base to achieve levels of thought never believed possible. Learning with Mike is fun and dynamic. After mastering these mathematical methods, you will be able to expand your brain’s capacity for learning any subject. Whether math has been a struggle or a breeze for you, Brainetics will blow you away! Guaranteed.

Mike and his Brainetics program have been featured on ABC’s 20/20 and were named ‘Best in America’ by Reader’s Digest. Recently, Brainetics was awarded a gold medal from Parent’s Choice. Please bring a calculator, paper and pencils and be ready to “wow” your friends, family and students when you get home!

Brainetics™ creator Mike Byster has a single mission: to get kids excited about math and learning. At eight years old, he started developing memory games using mnemonic devices that would eventually become part of the Brainetics program. A 1981 graduate of the University of Illinois, Mike’s commitment to youth education sets him apart from other math geniuses. He has crafted and perfected a fun and engaging program called Brainetics that children can use at home.

Brainetics uses pattern awareness and mental multi-tasking tools to build increased mental capacity. These techniques not only teach children the skills to do things with their brains they never thought possible, it also gives them a sense of self confidence as they master the lessons and are able to perform amazing mental feats.

Mike has discovered how to teach children to increase their mathematical, memory, problem solving and organizational skills beyond what they thought was possible. He has been successful in teaching Brainetics to kids of all abilities, helping them to do things they never thought they could do and inspiring them in the process. To celebrate the official launch of Brainetics, Mike began his *National Brainstorming Tour* in January 2008 to continue volunteering his time and teaching the Brainetics program nationwide.

55th Annual Conference on the Teaching of Mathematics Registration Form

Name _____

School/Institution _____

Preferred Mailing Address _____

City

State

ZIP

e-mail _____

Daytime Phone _____

Evening Phone _____

Grade Level _____

Please reserve your first and second choice workshops for each breakout session, using the corresponding workshop numbers in the booklet.

	Session I 8:30 9:30 am.	Session II 9:40 10:40 a.m.	Session III 10:50 11:50 a.m.
First Choice			
Second Choice			

Registration Fee (select one):

- Non-student, sessions and lunch \$60
- YES! I will be attending the luncheon.
Please reserve my ticket.
- Undergraduate Student, sessions only - \$10.00

Payment Method:

- Check payable to: Eastern Illinois University
- MasterCard Visa Discover
- Purchase Order # _____

Card Number _____

Expiration Date ____ / ____ Name on Card _____

Signature _____

Mail registration form and fee before April 3 to:

Mathematics Conference
School of Continuing Education
Eastern Illinois University
600 Lincoln Avenue
Charleston, IL 61920-3099



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