

OCTOBER 2014

# MU ALPHA THETA NEWSLETTER

## NATIONAL OFFICERS:

### PRESIDENT

Todd Taylor  
Vestavia Hills High School  
Vestavia Hills, AL 35216  
taylorgt@vestavia.k12.al.us

### PRESIDENT-ELECT

Betty Hood  
Brentwood High School  
Brentwood, TN 37027  
bettyh@wcs.edu

### TREASURER

John Albert  
University of Oklahoma  
Norman, OK 73019  
jalbert@math.ou.edu

### GOVERNOR REGION 1

Triscia Hochstatter  
Moses Lake High School  
Moses Lake, WA 98837  
thochstatter@mlsd.wednet.edu

### GOVERNOR REGION 2

Doris Parrino  
Baton Rouge High School  
Baton Rouge, LA 70808  
dparrino@ebschools.org

### GOVERNOR REGION 3

Rita Ralph  
Fairfield Christian Academy  
Lancaster, OH 43130  
rralph@fairfieldchristianacademy.com

### GOVERNOR REGION 4

Kim Woolfenden  
Tampa Bay Technical HS  
Tampa, FL 33610  
Kim.Woolfenden@sdhc.k12.fl.us

### NCTM REPRESENTATIVE

Laura Entrek  
Hoover High School  
Hoover, AL 35244  
LEntrek@hoover.k12.al.us

### SIAM REPRESENTATIVE

Terry Herdman  
Virginia Tech  
Blacksburg, VA 24061  
Terry.Herdman@vt.edu

### AMATYC REPRESENTATIVE

Kathy Mowers  
Owensboro Community  
& Technical College  
Owensboro, KY 42303  
kathy.mowers@kctcs.edu

### MAA REPRESENTATIVE

Steve Dunbar  
MAA AMC Director  
Lincoln, NE 68588  
sdunbar@maa.org

### EXECUTIVE DIRECTOR

Kay Weiss  
University of Oklahoma  
Norman, OK 73019  
matheta@ou.edu

## NATIONAL OFFICE NEWS *from Kay Weiss*

The new school year is well underway now. If you have new members to add, remember our online system is available 24/7. You will need to have your form of payment available when you enter your order. You may use a purchase order number, a check number as a purchase order number, or a credit card. If you need an invoice to get a purchase order number, you can enter the order and then print the invoice. When you return to the order later, it will be waiting for you in your Shopping Cart. Just click "Check Out", enter your PO number, and add your new member names.

If you need your order right away, remember to let us know by dropping a quick email to us at [matheta@ou.edu](mailto:matheta@ou.edu). Most orders are mailed the day you enter them or the next day. First class mail can take up to 7-10 days. Any order under 13 ounces (under 23 certificates) will go by first class mail. Over 13 ounces will go by Priority or FedEx Ground without charge to you on your first three orders each semester. These usually arrive in 3-4 days. If you need your order ASAP, add the \$15 FedEx 2 Day to your order or the \$25 Overnight charge. These are the only two rates we offer that are guaranteed to make it on a certain day.

Our Rocket City Math League contest is open to any student interested in competing. This is a free contest and you may use the exams for all your students if you like, not just your Mu Alpha Theta members. However, the

Log1 Contest and the Mathematical Minutes Video Contest are open only to Mu Alpha Theta members or associates. To compete, these students must be listed in our database. A student may only be listed in the database as an associate for up to one year. After that, the database will remove their name. If you were to try to enter that name again, the system should block you. We really love to serve your students and have much to offer them when they become a member. Our qualifications are set up so we can serve a student who meets our math GPA as soon as they enter their fifth semester of math. If a student has Algebra 1 and Geometry in middle school and enters your high school in Algebra 2, according to our minimum requirements they are eligible for membership with the right math GPA immediately. We have many students that are awarded \$2,000 summer grants twice during their high school membership.

To be eligible for a summer grant, note that a student must be a member by the fall semester to apply for a grant to use that next summer.

Above are some reminder dates. Next month we will talk more about our grants, awards, and scholarships. Keep your members informed of all we offer.

## UPCOMING DATES

**Oct 20-31:** RCML Interschool Test

**Nov 1-16:** ARML Power Contest Round 1

**Dec 1-31:** Log1 Contest Round 1

**Jan 1-:** Log1 Contest Round 2

## FREE “HARD PROBLEMS” DVD

Mu Alpha Theta is offering a free copy of the DVD “Hard Problems” to any active chapter requesting one. “Hard Problems” is a feature documentary about the extraordinarily gifted students who represented the United States in 2006 at the world’s toughest math competition - the International Mathematical Olympiad (IMO). One DVD per chapter while supplies last.

## FREE MATHEMATICA SOFTWARE

Mu Alpha Theta has free copies of the computer algebra system Mathematica that it will award to a maximum of three students per active chapter. Students should be studying Calculus to receive a copy. To request copies, sponsors may email [matheta@ou.edu](mailto:matheta@ou.edu) with the names and email addresses of the students. The Mathematica software is a downloadable file and the license is good for one school year.

## CHANGE IN ADDRESS

Please make sure to update all contact information for Mu Alpha Theta to:

**Mu Alpha Theta**  
**c/o University of Oklahoma**  
**3200 Marshall Ave, Suite 190**  
**Norman, OK 73019**



Connect with Mu Alpha Theta and Chi Alpha Mu through facebook. Add us as one of your favorite pages today. See you online!

## THANK YOU TO THOSE WHO HAVE SERVED:

### *Retired:*

Lincoln Park Academy, Ft Pierce, FL: Christine Rodic, 20 yrs  
MacArthur HS, Levittown, NY: Joanna Dillon  
Northside Health HS, San Antonio, TX: Linda Evans, 10 yrs  
Villa Maria Academy, Malvern, PA: Angela O'Reilly  
Adairsville HS, Adairsville, GA: Katy Carder  
Walter Hines Page HS, Greensboro, NC: Lindsay Averett  
Kingwood Christian School, Alabaster, AL: Nina Wills  
Peninsula Catholic HS, Newport News, VA: Daunice Sargent  
Petal HS, Petal, MS: Nikki Aldridge  
Thomas Wootton HS, Rockville, MD: Cecilia Allen Ratjter, 5yrs  
Stephen F. Austin HS, Sugar Land, TX: Brenda Knight, 9 yrs  
Milton HS, Milton, VT: Tim Lynch  
St. Thomas Aquinas HS, Ft. Lauderdale, FL: Bob Byrne  
Vestavia Hills HS, Vestavia Hills, AL: Hope Prevallet  
Muhlenberg County HS, Greenville, KY: Diane Walters  
West Forsyth HS, Cumming, GA: Walter Pavlicek, 6 yrs  
Alpha Omega Academy, Huntsville, TX: JoAnn Lawson  
Katy HS, Katy, TX: Mary Mattingly  
Fairfax HS, Fairfax, VA: Kirk Swientoniowski  
George Bush HS, Richmond, TX: Susan Lebold, 10 yrs  
Wirt County HS, Elizabeth, WV: Deloris Lipps, 25 yrs  
Colegio Karl C. Parrish, Colombia: Ana Zambrano, 6 yrs  
Astoria HS, Astoria, OR: Josh Padgett  
Woodlawn HS, Baton Rouge, LA: Timothy Spruill  
Stephen F. Austin HS, Sugar Land, TX: Teresa Baevich, 17 yrs  
Carolina Forest HS, Myrtle Beach, SC: Marsha Pini, 15 yrs  
Loyola College Prep, Shreveport, LA: Vona Weiss  
The Willows Academy, Des Plaines, IL: Beth Deichl  
Naaman Forest High School, Garland, TX: Sue Heslink 13 yrs  
Mallard Creek HS, Charlotte, NC: Francine Romain  
Florence HS, Florence, AL: Robin Horne  
Academy at the Lakes, Land O' Lakes, FL: Hung Vo  
Carroll HS, Ozark, AL: Amy Jackson, 26 yrs  
Stoneman Douglas HS, Parkland, FL: Ann Singleton  
Lynn HS, Lynn, AL: Everett Cockrell, 13 years  
Dutchtown HS, Geismar, LA: Chrystal Gautreaux  
Hickory HS, Chesapeake, VA: Dale Stoneman  
East Anchorage HS, Anchorage, AK: Samia Estassi  
The Woodlands HS, The Woodlands, TX: Karen Frazee  
Bainbridge College, Bainbridge, GA: Mary Glenn Grimes, 9 yrs  
Brookwood HS, Brookwood, AL: Jerica Vanoy

### *Deceased:*

Art Aquaviva, Verona HS, Verona, NJ

# SPONSORS

## *new!* CLASSROOM TEACHING GRANT

Do you know a former member who is now teaching math? Let them know about our Classroom Teaching Grants! Classroom Teaching Grants are available to any former Mu Alpha Theta member who has begun a mathematics teaching career. These former members can apply for up to \$1,500 during their first, second, or third year of teaching.

Funds may be used to reimburse the teacher for classroom supplies, math society meeting registration, or professional memberships. Please help us spread the word! Applications are available online under Grants > Classroom Teaching Grants.

## CALLING ALL TEST WRITERS AND EDITORS!

Mu Alpha Theta is looking for additional math test writers and editors for its National Conventions. At the end of this newsletter is an application for those interested in helping out. Each summer, we offer 30 different topic tests, a ciphering exam, three levels of individual exams, a Hustle speed topics test, and others. Tests are written either for Mu, Alpha, or Theta level students. Most tests are multiple choice, but writers provide both test questions and complete solutions.

The Educational Foundation pays an honorarium for each test written or edited. Payment is made in the year the test is used and exams become the intellectual property of Mu Alpha Theta. Questions must be clear, well written, unambiguous, and level appropriate. Examples of past tests can be found at our website under National Convention > Past Tests. Numerous years of examples are available there.

If you are interested in helping, please fill out this application and email back to [matheta@ou.edu](mailto:matheta@ou.edu). You may also FAX to 405-325-7184.

## DO YOU WANT TO PARTNER WITH OTHER CHAPTERS?

Mu Alpha Theta encourages chapters to work with one another to host community math events, invite speakers to talk to students, mentor local middle schools, run a math competition, or network.

To find chapters in your area, sponsors can log in using the chapter ID and password and click on the *Find a Chapter* link on the left. Sponsors can search by city, state, or region to find chapters and their contact information.

*Thank you for all you do and for helping us to serve you better!!*



Do you shop online at Amazon? You can now donate to the Mu Alpha Theta Educational Foundation by using AmazonSmile!

By going to [smile.amazon.com](https://smile.amazon.com) and choosing the Mu Alpha Theta Educational Foundation as your charity of choice, Amazon will donate 0.5% of your purchase to help support our scholarship, grants, awards, and other programs.

We appreciate your support!

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## RESOURCE LINKS from the MAA

### **More than 100 “Curriculum Bursts” Connect Contest Problems to Common Core**

James Tanton’s Curriculum Inspirations (CI) project repurposes American Mathematics Competitions problems to engage middle- and high-school students in the mathematical practices outlined in the Common Core State Standards. Check out the CI video archive, now boasting more than 100 online videos at <http://www.maa.org/math-competitions/teachers/curriculum-inspirations>.

### **Historical Activities for Calculus**

Calculus students can explore the history and mathematics of curve-sketching, tangent lines, and optimization using 24 interactive applets and 10 animations in the MAA Convergence article “Historical Activities for the Calculus Classroom” (<http://www.maa.org/publications/periodicals/convergence/historical-activities-for-the-calculus-classroom>).

### **Trigonometry in the Lost Century**

Logarithms turn 400 this year, but trigonometry flourished before John Napier’s 1614 invention, as Glen Van Brummelen explained at an MAA Carriage House lecture in March. Watch a slidecast of the talk at <https://www.youtube.com/watch?v=-OoyZtwhGbY>.

### **Hexagram Card Tricks**

Colm Mulcahy once again turns to Martin Gardner for inspiration, finding the kernel of his late August Card Colm post in the math popularizer’s Puzzles from Other Worlds. Read the post at <http://cardcolm-maa.blogspot.com/2014/08/trim-hex-anagrams.html>.

### **Math Club in a Box Activities**

<https://maamathclub.pbworks.com/w/page/12474458/FrontPage>

*Did you  
know?*

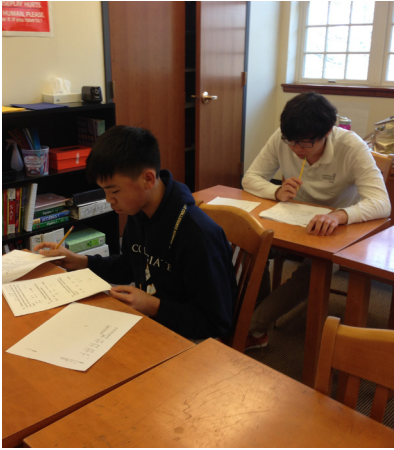
The MAA is a sponsoring organization of Mu Alpha Theta. Steve Dunbar, the MAA AMC Director, currently serves as the MAA representative to the Governing Council.



## CHAPTER NEWS

### LOUISVILLE COLLEGIATE SCHOOL'S INTRA SCHOOL MATH CONTEST

Joel Morris, the sponsor of Louisville Collegiate School's chapter, sent in photos from their Intra School Math Contest. The contest had a total of 35 students in 3 different classrooms compete. Students took a 15 question multiple choice test over 30 minutes. The questions ranged from Algebra 1 all the way to limits.



### KEYSER HIGH SCHOOL GOES TO NYC *by Deborah Seldomridge*

Students from the Keyser High School chapter, along with their teachers, spent two days this summer touring New York City. Shown below are students and staff as they gather in Times Square before their visit to MoMath (Museum of Mathematics) where the group attended an educational session on cryptography and toured the museum. A highlight of the visit to MoMath was viewing the art exhibit of Ryan and Trevor Oakes, who graduated from a West Virginia high school only 90 away from our school. These twin artists explore how the logic of art and the beauty of mathematics intersect offering new perspectives on visual representation. Along with a tour of the city, the visit also included a presentation from the sole survivor of a first responding unit of the FDNY at the newly opened 9/11 Tribute Center and Gallery. The honor students were rewarded with a performance of the Broadway Musical "Newsies" at the Nederlander Theatre.



# STUDENTS

## NATIONAL STUDENT DELEGATE OFFICERS:

### PRESIDENT

Nicolas Peña  
Region IV  
Western High School  
Davie, FL  
nicpena@rocketmail.com

### VICE PRESIDENT

Lin Lin Pan  
Region III  
Vestavia Hills High School  
Vestavia Hills, AL  
linlinpandaa@gmail.com

### SECRETARY/TREASURER

Blake Tillman  
Region II  
Bolton High School  
Alexandria, LA  
btilm305@gmail.com

### PARLIAMENTARIAN

Maritza Armstrong  
Region I  
Moses Lake High School  
Moses Lake, WA  
onechocolate@gmail.com

## MU ALPHA THETA ALUMNI AWARDED TAU BETA PI SCHOLARSHIPS

This past July, Tau Beta Pi, the engineering honor society for colleges and universities, announced their 242 Tau Beta Pi Scholars for undergraduate study during the 2014-15 academic year. Of the 242 recipients, 11 were Mu Alpha Theta members in high school.

Recipients of the Tau Beta Pi Scholar award typically receive \$2,000 for their senior year of engineering study, but a few students receive only \$1,000 for one semester. All Tau Beta Pi Scholarships are awarded on the competitive criteria of high scholarship, campus leadership and service, and promise of future contributions to the engineering profession.

Congratulations to our alumni!

## 2014-2015 MATH MINUTES VIDEO CONTEST

The grant for the Mathematical Minutes Video Contest was increased this year to \$3,000. This means that more prizes will be available to winners! Be sure to begin thinking about your entry early.

This past year's Mathematical Minutes Contest was very exciting. There were many, many excellent videos. Even more importantly, schools seemed to be having a great deal of fun. It was obvious that chapters took the contest seriously and put a great deal of effort and time into their products. It was very enjoyable to watch so many

chapters and so many students having a good time. For that reason alone, we encourage every chapter to consider making a video for next year's contest.

With that said, many chapters have questions about what makes a prize winning video. It is almost impossible to answer that question, but the judges have compiled a list of do's and don'ts that may be useful for chapters considering taking on this challenge.

1. WATCH last year's videos. The winning videos all had some surprising elements that made them stand out. Other videos, that did not receive awards, had wonderful ideas, but made a few mistakes that hurt their chances of winning. Of course, there were also the videos where the school had a great deal of fun. There is absolutely nothing wrong with that either.

*(continued on next page)*

2. Please don't create videos that contain objectionable materials: 1) smoking 2) drinking 3) illegal activities 4) dangerous activities. We plan to disqualify videos with such materials.
3. Don't be LATE. Video entries are time-stamped and even a second too late is going to be disqualified. Give yourself plenty of time to deal with computer issues.
4. Check your links.
6. Fill out the entry form completely. All information is needed to properly download, view and credit a video. We had nearly 40 videos this year, and improperly documented videos risk being ignored.
7. Make sure that there are no identifying features of your school. Check clothing and backgrounds carefully.
8. Your video must stand alone. Please don't send us emails, attachments, or explanations. We only need the submission form with a valid link.
9. The math in the video must be accurate. (McDonald's arches and suspension bridges are not parabolas.)

### **Video Contest Production/Content Hints (in no particular order)**

1. You DON'T have to use all 5 minutes. Make sure that you don't bore the viewer with unnecessary filler.
2. Be wary of overused themes: Extended Chase Scenes, Dream Sequences, and Musical Parodies.
3. If you are going to do a parody of popular music, make sure that your words actually fit the song. The cleverest verses aren't impressive if they don't match the style and rhythm of the original.
4. If your words are important, make sure your AUDIO is crystal clear. Viewers don't have time to decode bad audio. Some schools included a text overlay.
5. Costumes can really help a video if they make sense in the context of your story. If you MUST use that penguin outfit, your story should really need a penguin.
6. The first few seconds of your video are critical. Be sure to include creativity here. You need to catch the viewer's attention quickly.

**For more information, links to past winning videos, and application to submit your entry, see <http://www.mualphatheta.org/Contests/Presentation.aspx> .**