

POINTS AND ANGLES

Newsletter of the Metropolitan
Mathematics Club of Chicago

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Metropolitan
Mathematics
Club of
Chicago



Volume XL

June 2006

No. 9

Intriguing Mathematics that I Have Stumbled Upon or On

Jim Rubillo, NCTM Executive Director

By RICH RUKIN

On Sept. 8, Jim Rubillo will be our speaker. The talk will present a collection of mathematical situations that began by exploring a simple situation, or a well known topic, but by posing a few strange questions, or by looking at the situation in a different way, some interesting mathematical insights emerge. This talk will interest folks who are just starting their grades 7-12 teachers, but will engage even sophisticated and experienced teachers.

Jim Rubillo is the executive director of the National Council of Teachers of Mathematics. Prior to coming to NCTM, he spent 30 years serving Bucks County Community College, Newtown, Pennsylvania in a variety of roles including professor of mathematics, associate dean for information systems and services, executive assistant to the president for planning assessment and research, and chairperson of the department of mathematics and computer science. Before that, Jim was a high school teacher and department chair. He has conducted many K-12 in-service programs for schools and school districts across the continent on a variety of mathematics education topics. He has served as a consultant for many corporations in the areas of total quality management, statistical process control, and project management. Jim is a frequent speaker at professional meetings and has made over 675 invited presentations in all 50 states.

REMEMBER!! You can earn CPDU credits for attending dinner meetings!

Date: Friday, September 8, 2006
Time: 5:30 p.m. Doors Open
6:00 p.m. Social Hour
7:00 p.m. Dinner and Talk
Place: Fountain Blue Banquets &
Convention Center
2300 Mannheim Rd.
Des Plaines, IL
(847) 298-3636
Cost: Members \$31
Nonmembers \$37

RESERVATION DEADLINE
Monday, September 4, by noon,
please!

To RESERVE:
Call Evanston Math Department at
(847) 424-7600 or
email: reservations@mmcchicago.org
Requests for special meals must be made
in advance.



From Southbound I-294 &
Eastbound I-290:
Exit at I-190 West to O'Hare; Exit onto North
Mannheim Rd.; Take Mannheim Rd. North
2.25 miles.
From Northbound I-294:
Exit at West Touhy Ave.; Take Touhy Ave. to
Mannheim Rd.; Turn right on Mannheim Rd.
Public Transit:
Take the CTA Blue Line to the Rosemont
Bus Terminal; Take Pace Bus #223; Exit at
Touhy Ave. & Lee Rd.; Walk East on Touhy
to Mannheim Rd.

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The Current State of School Mathematics

Zalman Usiskin

May 5, 2006

BY RAY KLEIN AND ILENE HAMILTON

The MMC celebration of Cinco de Mayo included lively conversation among the largest crowd of the year, the introduction and recognition of the three scholarship awardees, the introduction of the newly elected MMC board members, complimentary wine to accompany the meal, and most importantly a presentation by Zalman Usiskin of the University of Chicago. Using the title of “The Current State of School Mathematics”, Zal used a mathematical motif to express his ideas.

Using statistics from various mathematical studies, he emphasized the POSITIVE aspects of mathematics education in our country at this time. These include the facts that students are now taking significantly more mathematics than ever before and that scores of students on national tests have been increasing for some time. Finally, there exists a greater variety of materials for teaching mathematics than ever before.

Contrasted with this are the NEGATIVE aspects. First, the gap between the mathematics performance of various groups is enormous and declining very little, if at all. Citing statistics from various mathematics education assessment studies, the gap between black and white subgroups is staggering. These two groups were the only groups Zal discussed, since he believed other subgroups’ statistics might be biased due to language considerations. Secondly, the gap between what is offered in regard to mathematics courses between different schools is wide. Lastly, the mathematics teacher is beleaguered by conflicting expectations coming from all directions, including differing course syllabi, textbooks, and high stakes tests.

MMC BOARD OF DIRECTORS		Term
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Zal next spoke about the RATIONAL versus the IRRATIONAL solutions to the problems facing mathematics education that are being considered in this country. On the RATIONAL side is the aspect of the No Child Left Behind (NCLB) Act, stating that no public non-charter school be given a free exemption from this rule. Likewise, there is a trend toward consistent standards across the country. Finally, there is the attempt to test as many students as possible to determine how we are doing.

But, the IRRATIONAL aspects tend to negate these trends. First the belief that NCLB mandated testing would improve scores overall and that these mandated tests would reduce the performance differences between high- and low-performing groups. Zal’s comment was that this isn’t true. He further commented that data shows that certain test scores can be improved through training for the particular test, but that this does not generalize to all testing and hence an improvement in the learning of mathematics. The next irrational aspect is the notion that “one size fits all.” This does not work in a country in which there are distinct subgroups of students with varying goals and expectations for their mathematics education. The next problem is that some NCLB provisions are mathematically impossible to attain. Some of these are the “Lake Wobegon Effect” that states that all students can be brought up to grade level, in which “grade level” is defined to be the mean of the achievement of all students at that grade. Next the “Movement Paradox” that mistakenly states that moving students from a poor-performing school to a better-performing school will improve school performance. Finally, the “Upper Bound Effect” that states that school mean scores can increase indefinitely. The most distressing of all of these IRRATIONAL aspects is that the U.S. Department of Education gets most of its advice and leadership about what to do in school mathematics from people who have done no work in mathematics education.

Zal concluded his remarks with some IMAGINARY beliefs that seem to abound. Data seems to show that the remark that the U.S. math curriculum is “a mile wide and an inch deep” doesn’t seem to be true. In fact, compared with many other countries, our curriculum is comparable. Next, there seems to be contrary evidence to the “fact” that our standing on international tests in mathematics has serious implications for our economy. Finally, using Singapore as a good model to follow for our own math educational system is like comparing apples to oranges.

In conclusion, Zal gave a rating of the current state of mathematics education in the United States. The rating of $5 - \sqrt{2} - 3i$ reflects the RATIONAL, IRRATIONAL, and the IMAGINARY solutions to our problems.

This rating emphasizes the humor present throughout Zal’s talk. His witty comments, his puns, and his polished delivery made for a most delightful and entertaining presentation. This was Zal’s twenty-first presentation at an MMC dinner meeting, and his address more than met the expectations of the large crowd in attendance. As in so many of his previous presentations, he entertained us with his comments, but more importantly, he gave us much to think about. He continually puts his finger on the pulse of what is happening in mathematics education in this country, and his synthesis is what we have come to expect of him as the pre-eminent leader in mathematics education in this country. Thank you Zal. We look forward to hearing from you again in another two years.

Welcome your new MMC Board members:

Conrad Wayne, President-elect
 Bob Ruzich
 Ron Vavrinek
 Jenny Wexler

These newly elected officials will begin their term in August and their term will end the spring of 2009. It is the dedication of professionals such as these that makes MMC such a unique and highly respected organization.

A special thanks to the election committee, Ilene Hamilton, Harlan Goldberg, and Paul Christmas, for their hard work.

**MMC Speakers
2006-2007
Tentative Schedule**

<u>Date</u>	<u>Speaker</u>	<u>Title</u>
Sept. 8	Jim Rubillo, Executive Director, NCTM	Intriguing Mathematics that I Have Stumbled Upon or On
Oct. 13	Steve Leinwand, American Institutes for Research	Some Practical Strategies for Ensuring that No Teacher of Mathematics is Left Behind
Nov. 3	Terry Wyberg, University of Minnesota	Analyzing Mathematical Puzzles
Dec. 1	Amie Wilkinson, Northwestern University	Intriguing Math Problems
Jan. 19	John Benson, Evanston High School	The Essence of Excellent Teaching
Feb. 23	Steve Viktora and Paul Sally, New Trier High School	What We've Learned about Teaching from Observing Classes
April 13	Gene Olmstead, Elmira Free Academy	The Locus Construction and Derivation of Polar Equations
May 11	Audrey Weeks, Campbell Hall School (retired)	Exploring Math Through Interactive Animation

MMC Membership and Change of Address Form

Mail to: MMC
415 S. Ridgeland Ave. #2
Oak Park, IL 60302

Make check payable to MMC.

Please use a different form for each person.

Name _____

Address _____

Phone _____

School _____

Address _____

Phone _____

E-Mail _____

Membership: New Renewal

Choose one:

1 year (\$20) _____

2 year (\$35) _____

3 year (\$50) _____

1st year teacher _____

retired (\$10) _____

student _____

Donations:

Scholarship Fund _____

Speaker Fund _____

Total amount of check: _____

Check preferred mailing address above.

Change of Address

NOTICES & REMINDERS



NCTM CENTRAL REGIONAL CONFERENCE

Chicago, Illinois
September 20-September 22, 2006
(Wednesday, Thursday, Friday)

Visit the Windy City!
Experience the Winds of Change in
Mathematics Education!

- This will take the place of the 2006 ICTM Conference
- Located at the Hyatt Regency McCormick Place on Lake Michigan. Access to Museums, Navy Pier, Magnificent Mile, Millennium Park, and world-class shopping and dining.
- Almost 400 speakers from 36 states and 6 foreign countries.
- Experience Chicago with field trips; information available at <http://www.ictm.org>
- Featuring a CAS (Computer Algebra Systems) Technology Strand
- Registration information at <http://www.nctm.org/meetings/chicago/registration.htm>

POINTS AND ANGLES

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Points and Angles, published nine times per school year, is the official publication of the Metropolitan Mathematics Club of Chicago. Founded in 1913, the Metropolitan Mathematics Club is the National Council of Teachers of Mathematics' first affiliate.

The official club website: <http://www.mmchicago.org/>

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Streamwood, IL 60107

MMC Scholarship Winners

The process of choosing three winners from this year's very impressive group of applicants was difficult. After much deliberation, the following three students were selected. Thank you to all who encouraged students to apply and consider math education as a career! We also thank the Filliman family for funding two additional scholarships in honor of their parents.

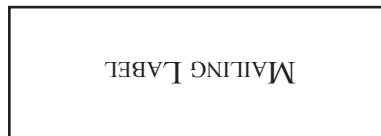
Catherine Hutchison is this year's MMC Scholarship winner. She attends Evanston Township High School and was nominated by John Benson. She has taken Multivariable Calculus and Linear Algebra this year to cap off a very impressive academic career. She is involved in math team, helps 3rd graders with math and science, and is very devoted to the diving team, orchestra, and church. Additionally, she has traveled to Appalachia as part of a weeklong service project four times.

Jeffrey Mudrock attends Lincoln-Way Central High School in New Lenox and is a Filliman Scholarship winner. Lisa Parker sponsored him. Jeff earned a perfect 36 on the math portion of his ACT and is #1 in his class. He is taking AP Statistics and AP Calculus BC this year. He is a member of the varsity basketball team, mathletes and Future Educators of America.

Kathryn O'Brien is from Harry D. Jacobs High School in Algonquin and is also a Filliman Scholarship winner. Sandy Ratter nominated her. She is currently enrolled in Honors Calculus and has received all "A's" throughout high school. She has served as a peer tutor and teacher's aid. Kathryn has many other involvements including varsity softball, community service, and regional representative of student councils.

If you would like a notice or reminder to appear in *POINTS AND ANGLES*, please email the text you would like to appear to kristenclegg@comcast.net no later than the date of the MMC meeting preceding the issue in which you would like it to appear. All notices are subject to editing.

Your membership renewal date appears in the upper right corner of the label.



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