



AMTNYS Summer Math Institute
Wells College, Aurora, NY
August 2, 2009-August 6, 2009

www.amtnys.org

Final Program

Sunday August 2	Picnic	Wells College Golf Club
Monday August 3	Keynote Address	Auditorium
	Sessions 1, 2 & 3	Stratton Hall
	Puzzle Party/wine/ dessert	Weld Hall Main Lounge
Tuesday, August 4	Sessions 4 & 5	Stratton Hall
	Tours / Dinner on your own	All over the Finger Lakes region
	Ice Cream Social	Dorie's Ice Cream Shop
Wednesday, August 5	Sessions 6,7, 8, & 9	Stratton Hall
	Banquet	Main Dinning Hall
Thursday, August 6	Sessions 10 & 11	Stratton Hall

Banquet Speaker	Wednesday August 5
<i>Eric O'Brien</i>	
Topic	
"I Know That Numbers Dance"	
<p>Eric O'Brien has been a teacher in Bellmore on Long Island for the past fifteen years. Eric also works in the Creative Problem Solving Institute at SUNY Old Westbury, and as an editor for the Math Olympiads. In Eric's presentation, "I Know That Numbers Dance", Eric will be explaining some of the marvels of number theory that catch his interest and the interest of those he teaches.</p>	

Featured Speaker	<i>Tom Chapin</i>	8:30-9:30
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Keynote Address

"Not to the Test"

Followed by:
Snack Break

Monday	<i>Session One</i>	10:45-12:00
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How Making Mistakes and Blabbing it to the Universe Improves My Teaching	Room 106	G
Blogs can help you become a more reflective and collaborative teacher. Get involved in the worldwide discussion.		
Kate Nowak	Fayetteville Manlius Schools	

Another (Better?) Approach to Fact Mastery	Room 312	K-2
Practice ways to help children internalize addition facts so they stop relying on their fingers. Use of tens frames, hundreds charts and other strategies.		
Nancy Wagner	Hunter Tannersville CSD (Retired)	

Projects for Improving Student Mathematical Understanding	Room 318	3-5,MS
Ideas to teach and reinforce mathematical concepts and procedures will be shared. Come participate in projects that students like to complete.		
Gary Furman	Monticello CSD	

Turning Kids onto Math: Trains, Cables, Towers and Other Intriguing Problems	Room 311	MS,HS
Participants will solve non-routine problems and then discuss how these problems can be used in their classrooms to generate student interest in specific NYS curriculum strands and in mathematics in general. For example, problems that require the application of the Pythagorean Theorem for Right Triangles, the relationship between the diameter and circumference of a circle, and the quadratic equation will be included in this session.		
Jim Matthews	Siena College	

Puzzling 9th Year Mathematics	Room 304	HS
1) Why is solving a linear equation like doing a jigsaw puzzle? 2) Solving quadratics ... <u>before</u> factoring??? 3) Radical systems of equations, but still apolitical!		
John Titterton	Syosset High School (Retired)	

Monday *Session Two*
1:00-2:15

Games Young Thinkers Play K-6
Room 312
Math games are great if they are developmentally appropriate and students learn about math by playing them. Come play some great games!

Mary Altieri Putnam/Northern Westchester BOCES

Bringing the Unit Circle Alive HS
Room 304
Presentation will discuss applications of radians, reference triangles, trig identities, geometry connections for both algebra 2 classes and applications to high school science courses.

Sally B. Mitchell East Syracuse Minoa HS
Jean Hallagan SUNY Oswego

Monday *Session Three*
2:30-3:45

Numbers League-Math & Superheroes 3-5,MS
Room 312
Play Numbers League in a classroom environment and save Infinity City. See firsthand how this game can teach, focus, and excite your students about math.

Chris Pallace Bent Castle Workshops

Nested Triangles, Checkerboards & Painted Cubes MS,HS
Room 304
Nested polygons offer a wonderful way to view exponential functions and their geometric equivalents. Beginning with the handshake problem, we will explore a variety of exponential functions and analyze their interrelationships.

Eric O'Brien Bellmore Schools

Math for Math Lovers 3-7
Room 311
FREE on CD-ROM: Fifty enrichment activities including such classics as: The Tower of Hanoi, The Bridges of Konigsberg, and the Painted Cube Problem. Also interactive software for solving fifty AlphaMatic puzzles such as ODD+ODD=EVEN.

Alan Alterman Scarsdale Public Schools (retired)

Monday *Mini-Courses* 1:00-3:30

Connecting Fractions, Decimals, Percents, Ratios, and Proportions to the NYS Mathematics Standard 3 Room 102 5-7
In this mini-course, participants will engage in hands-on activities connecting these concepts to all 10 of the process and content strands.

Ben Lindeman NYSED (Retired); Private Consultant

NSpire - Integration in the Classroom Room 318 MS,HS
TI Nspire is an integrated, portable tool which integrates word processing, spreadsheet, dynamic geometry, and graphing technology. Learn the fundamentals of this program today and we'll follow up with writing lessons for classes tomorrow.

Chris Monahan AMTNYS President-Elect, Niskayuna HS

Introduction to GeoGebra Room 106 MS,HS
Download it from Geogebra.org. Takes only a few minutes. Free and easily usable software to teach Geometry and Algebra. Could be used in classrooms and at homes.

Dani Novak Ithaca College

Tuesday Session Four

9:00-10:15

Another (Better?) Approach to Fact Mastery K-2

Room 312

Practice ways to help children internalize addition facts so they stop relying on their fingers. Use of ten frames, hundred charts and other strategies.

Nancy Wagner Hunter Tannersville CSD (Retired)

Making Probability Larger than Life 3-5, MS
Room 318

How do you make a spinner larger than life? Participants will recreate a spinner from collect data and watch the spinner become larger than life-size.

Leota Crary Madison CSD

'Discovering' the Unit Circle HS, PS
Room 304

Using a hand-drawn circle (using any circular template), and 'arbitrary' scale (using a paper strip), and TI-Nspire technology, students make scatterplots of sin/cos/tan curves. The lesson provides a hands-on (almost science-lab) way of deriving the important function values of a unit circle. It also allows for introduction to the identity $\tan x = (\sin x / \cos x)$.

Marc Coffie Spencerport HS

Tuesday Session Five

10:45-12

Munchible Mathematics K-2, 3-5
Room 312

A scrumptious approach to the PreK-5 mathematics Performance Indicators. We'll chew our way through the five content strands. Edible manipulatives and hand-outs provided.

Beryl Szwed Lake Placid CSD

Teaching Math with Design MS
Room 311

Knitters, quilters and artists of all kinds use geometry, ratio and proportion. We can use design to engage kids in projects that apply the math they learn.

Mary Altieri Putnam/Northern Westchester BOCES

Energizing Middle Level Math MS, HS
Room 304

Engaging activities and instructional ideas appropriate for grades 6 through Pre-Algebra. Hardcopies and on-line materials will be made available for participants. Many of the ideas presented are also applicable as warm-ups for Algebra-level classes.

Donna and Fred Roberts Cayuga Community College

Tuesday

Mini-Courses

9:00-11:30

Rocket Math Room 318 4-8

Build and launch your own soda bottle rocket. Analyze data on your rocket's flight. Use the trigonometry of similar triangles to determine how high your rocket went. 5...4...3...2...1...BLAST OFF!

Alan Alterman Scarsdale Public Schools (Retired)

Observing the Universe: Using the Math Room 102 6

Examine the many opportunities to use mathematics inspired by mankind's interest in the heavens. This session will utilize various materials, and will include daytime and evening telescopic observations as a bonus.

Bob Hazen Retired

NSpire - Integration in the Classroom (The Sequel) Room 106 MS, HS

TI Nspire is an integrated, portable tool which integrates word processing, spreadsheet, dynamic geometry, and graphing technology. We'll write lessons for the courses you are teaching.

Chris Monahan AMTNYS President-Elect, Niskayuna HS

Wednesday *Session Six*
9:00-10:15

How Making Mistakes and Blabbing it to the Universe Improves My Teaching **G**
Room 106
 Blogs can help you become a more reflective and collaborative teacher. Get involved in the worldwide discussion.
Kate Nowak **Fayetteville Manlius Schools**

Building Student Number Sense and Operations **3-5**
Room 318
 Participants will play games and complete activities that help students build their number sense as well as improve their computational fluency.
Gary Furman **Monticello CSD**

Turning Kids onto Math: Maps, Bridges, Cones, and Other Intriguing Problems **MS, HS**
Room 304
 Participants will solve non-routine problems and then discuss how these problems can be used in their classrooms to generate student interest in specific NYS curriculum strands and in mathematics in general. For example, problems that require the application of spatial reasoning, reasoning and proof in geometry, and reasoning and proof with integers and real numbers will be included in this session.
Jim Matthews **Siena College**

Wednesday *Session Seven*
10:45-12:00

Creating Animated Presentations of Whole Number Computation **K-2,3-5,5**
Room 106 Watch a demonstration of an animated PowerPoint on whole number computation, and then try your own using PowerPoint.
Jean Hallagan **SUNY-Oswego**

Constructivism in the High School Mathematics Classroom **HS**
Room 311
 This interactive session will allow its participants to work on hands-on activities that can occur within the format of a structured high school mathematics lesson.
Maria E. DiCarlo **St. Joseph's College**

Wednesday *Mini-Course* **9:00-11:30**

Connecting Fractions, Decimals, Percents, Ratios, and Proportions to the NYS Mathematics Standard 3 **Room 102** **5-7**
 In this mini-course, participants will engage in hands-on activities connecting these concepts to all 10 of the process and content strands.
Ben Lindeman **NYSED (Retired); Private Consultant**

Middle School Math Concepts through Reading the Finger Lakes Landscape **Room 312** **MS**
 Participants will walk along the east shore of Cayuga Lake and explore different features of the landscape, and connect these observations to New York State Math Learning Standards for grades six through eight. Activities will include building weathervanes and finding wind direction to predict the weather, finding different micro-climates and eco-systems along the lake shore, discovering unique aspects of the local topography as they relate to math, and looking at the natural history of the Finger Lakes.
Mark Hanok **The Western Catskills Weather Gazette; WRRC Radio**

"Nspiring" Minds Want to Know **Room 311** **HS**
 The TI-Nspire and TI-Nspire CAS provide a technology platform more powerful than previous handhelds. Come and explore the potential. Classroom activities will be demonstrated.
Bill Caroscio **T³ National Instructor**

Wednesday
1:00-2:15 *Session Eight*

Math Talk K-6
Room 102
If we want our students to understand the math they are doing we need them to explore and discuss the meaning of mathematics concepts. Let's take a look at some activities and ideas that will engage our students in discussions that will help them become mathematicians.
Mickey Jo Sobierajski
AMTNYS President, Fulton City Schools

Discovering' the Unit Circle HS,PS
Room 312
Using a hand-drawn circle (using any circular template), and 'arbitrary' scale (using a paper strip), and TI-Nspire technology, students make scatterplots of sin/cos/tan curves. The lesson provides a hands-on (almost science-lab) way of deriving the important function values of a unit circle. It also allows for introduction to the identity $\tan x = (\sin x / \cos x)$.
Marc Coffie Spencerport HS

Technology and Mathematics: The Right Angle
Room 304 MS,HS
7 pieces of software + 113 digital images + 5 grade levels + 37 ideas + 17 videos = 73 minutes of prime technology fun. No calculators please—imagination only.
Frank Sobierajski AMTNYS

Wednesday
2:30-3:45 *Session Nine*

Problems in Geometry with Unique Outcomes MS,HS
Room 102
A brand new selection of problems in geometry suitable for grades 7 through college. Each problem can be used as a student exploration either in groups or for the individual. Bring your calculator and put on your thinking cap!!
Paul Schwiegerling SUNY Buffalo
Gifted Math Program

Puzzles & Codes to Enhance Number Theory MS,HS
Room 304
Begin your school year with an exciting game, "Break the Code" and escort your classes on a wonderful excursion into the world of number theory. While the original puzzles are aimed at middle school students, the later explorations will enthrall high school and college students alike.
Eric O'Brien Bellmore Schools

Making Middle School Math Fun!
Room 312 MS
Need some ideas to motivate your middle schoolers? Participants will join in and leave with games and activities based on active learning. Come & have some fun!
Sue Summerfield Fort Plain CSD

Wednesday 1:00-3:30
Mini-Course

Mathivators: Motivational Tools for Mathematics Instruction Room 318 3-5,MS
Students are asked to appreciate the beauty of mathematics. Mathivators are activities, strategies, projects and games designed to do that: allow teachers to motivate so they can really enjoy and understand mathematics.
Kim Loucks Teaching and Learning Connected
John Hinton

TI-Nspire Educational Technology in the Math Classroom Room 311 MS,HS,PS
Investigate the latest educational technology for your classroom. Engage your students and allow them to discover mathematical principals. Nspire your students to appreciate math!
Dana Morse Texas Instruments

Thursday 9:00-10:15	<h1>Session TEN</h1>	
The Future of MST in NYS G Room 304 Discussion of how AMTNYS, working with STANYS, NYSTEPA, and other organizations will improve the teaching and learning of Science, Tech Ed, Engineering, and Math (STEM). Bob Hazen Retired	Thursday 10:30-11:45	
Games Young Thinkers Play K-6 Room 102 Math games are great if they are developmentally appropriate and students learn about math by playing them. Come play some great games! Mickey Jo Sobierajski AMTNYS President, Fulton City Schools	Making Probability Larger than Life 3-5,MS Room 318 How do you make a spinner larger than life? Participants will recreate a spinner from collect data and watch the spinner become larger than life-size. Leota Crary	
Constructivism in the High School Mathematics Classroom HS Room 318 This interactive session will allow its participants to work on hands-on activities that can occur within the format of a structured high school math lesson. Maria E. DiCarlo St. Joseph's College	Problems in Geometry with Unique Outcomes MS,HS Room 312 A brand new selection of problems in geometry suitable for grades 7 through college. Each problem can be used as a student exploration either in groups or for the individual. Bring your calculator and put on your thinking cap!! Paul Schwiegerling SUNY Buffalo Gifted Math Program	
Thursday 9:00-11:30 <h1>Mini-Course</h1>		
Improving Student Success on NYS Exams Participants will learn about instructional practices that have been shown to improve student performance on state assessments. These practices help students to pull out important information from each problem that is essential to answering the question. Gary Furman	Room 218	3-5,MS,HS Monticello CSD
"Nspiring" Minds Want to Know The TI-Nspire and TI-Nspire CAS provide a technology platform more powerful than previous handhelds. Come and explore the potential. Classroom activities will be demonstrated. Bill Caroscio	Room 311	HS T³ National Instructor

2009 Summer Math Institute Directors and Chairpersons

Institute Directors : Frank Sobierajski

Banquet: Mickey Jo Sobierajski

Commercial Exhibits: Beryl Szwed

Entertainment: Ronni David

Program: Jennifer Koch and Jennifer Jessup

Compiler: Sean Flansburg

Publicity: Frank Sobierajski

Registration: Beryl Szwed

Scholarship Sales: Beryl Szwed

2009 Summer Math Institute Presenters

Alterman, Alan
Altieri, Mary
Caroscio, Bill
Coffie, Marc
Crary, Leota
DiCarlo, Maria
Furman, Gary
Gilchriest, S. Nancy
Hallagan, Jean
Hanok, Mark
Hazen, Bob

Hinton, John
Lindeman, Ben
Lofthouse, Brenda
Loucks, Kim
Matthews, Jim
Monahan, Chris
Morse, Dana
Novak, Dani
Nowak, Kate
O'Brien, Eric
Pallace, Chris

Roberts, Donna
Roberts, Fred
Schwiegerling, Paul
Sobierajski, Frank
Sobierajski, Mickey Jo
Summerfield, Sue
Szwed, Beryl
Titterton, John
Wagner, Nancy

