

The Mathematics and Computer Information Sciences Department State University of New York College at Old Westbury

Presents

The Thirtieth Annual

LIMAÇON

Long Island Mathematics Conference

Cultivating Math Reasoning Friday, March 11, 2016, From 7:45 A.M. to 2:35 P.M. at SUNY College at Old Westbury, Campus Center

Co-sponsored by:

The Nassau County Mathematics Teachers' Association

The Suffolk County Mathematics Teachers' Association

The Nassau County
Association of
Mathematics Supervisors

The Association of Teachers of Mathematics of New York City

> Partially funded by a grant from NYS Department of Education

LIMAÇON, designed for mathematics educators from primary through university level, provides opportunities for professional interactions and offers a forum for the exchange of concerns, innovative ideas, and achievable goals. This year's conference theme: **Cultivating Math Reasoning at All Levels** focuses on questioning techniques that encourage students to think about mathematics.

The **keynote speaker** is **Dr. Marion Small**, the author and international development consultant for Improved Mathematics Education. Dr. Small was a dean and professor of education at the University of New Brunswick.

Dr. Small's keynote address is followed by a daylong series of workshops focused on mathematics education, pedagogy, and problem solving. Participants can expect sessions to provide ideas, techniques, and skills that will improve teaching and content effectiveness, and energize their classroom.

QUESTIONS? Contact Ronni David: 516-359-2794 (MathRonni@cs.com) or Mimi Schnier, 516-876-3261

This year, the only way to register for the conference is by using our on-line site http://www.limathconference.org

The cost for the conference, which includes a Continental Breakfast and Lunch, is:

- \$50 for ATMNYC, NCAMS, NCMTA, or SCMTA members
- \$60 for non-members
- \$25 for full-time students



On-site Registration will be accepted on a limited basis for a \$10 additional fee.

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Friday, Marcl	Long Island Mathematics Conference h 11, 2016 ge at Old Westbury	N I	Mail P.O. to Mr. A. Kalish Limaçon Conference SUNY College at Old Westbury
Name			Box 210 Dld Westbury, NY 11568-0210
School/Affiliation			Payable to: L.I. Math Conference Board
	SCHEDULE FOR THE LONG ISL	AND NATHEMAT	ICS CONFERENCE
7:45 - 8:30	CHECK-IN, CONTINENTAL BREAK	SAST d PARBIT	TOR BOOTHS (Campus Center)
8:45 - 9:15	INTRODUCTION by L.I. Mathematic		
9:15 - 10:15	KEYNOTE ADDR <mark>I SS by Ir. Maria</mark>		
	Professional Developmen Consultan		chemet cs leducation
10:30 - 2:35	SESSIONS A-D see schedule (all res	_	
BUFFET LU	NCHEON during either session B or (y	````
7:45 - 1:45	EXHIBITOR FOOT IS AVAILABLE		
roma #5	51 Chef Salad (no ham) 52 Vegan/gluten free platter (baby spina Individual lu tine lettuce, casumber comato, carrot stic	nch platters in cludes: cks, new potato sarage	sting bean salad, and either
Session A (10 Workshops 1	0:30 – 11:20) 1 st Choice	2 nd Choice	3 rd Choice
	C 1 st Choice 2 nd Choice 5 (11:35 – 12:25) Workshops 16 – 25 C (12:40 – 1:30) Workshops 26 – 35	3 rd Choice	Lunch Choice
Session D (1:45 – 2:35) 1 st Choice 2 nd Choice 3 rd Choice Workshops 36 – 50			3 rd Choice

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- 1 Graphic Prompts for Questioning Mr. Joseph Porzio K-4 Math Consultant EC/Elem GPQs are aligned to the NYSED CCLS. There are more than eight dozen cards which depict a graphic designed to develop, promote and support proficiency in math, and its accompanying language, at the pre-K/K levels.
- 2 Start with the Story Ms. Heidi Bromley K-4 Questar III BOCES
 The greatest challenge facing students and teachers is how to interpret and communicate through word problems and their solutions. Let's change perspective focus on the story first, numbers later and apply the practices to how we synthesize and communicate our solution.
- 3 Guided Math Instruction Ms. Robin Rann K-5 Northport/E Northport SD Participants will be introduced to guided math, a strategy that can be used to differentiate math instruction, while also maximizing students' success in number sense, computational fluency, problem solving, and reasoning. Co-presenters: Matt Comiskey, Lindsey Andersen, and Jennifer Desmond
- 4 Cultivating Mathematical Conversation Dr. Marian Small K-8 One, Two, ... Infinity Why you should be using open-ended questions: (1) greater student accessibility, (2) allow stronger students to take the questions further, (3) classroom conversations become richer. Take away examples of great open-ended questions.
- 5 Math, iPads, and Apps
 Ms. Jennifer Cottone
 4-8 JFK School Great Neck
 Teachers will be introduced to the use of iPads to engage students in math. Emphasis will be placed on using Google
 Drive, Google Classroom, Notability, and Math Chat. If time permits, we will explore other math apps.
- 6 Navigating the CC with the Nspire & Navigator Dr. Paul Pelech 5-12 Great Neck Schools This exciting, hands-on presentation gives teachers an opportunity to use a unique piece of math technology. Make a powerful classroom connection with interactive wireless graphing calculator technology! Calculators provided.
- 7 Games to Develop Understanding Probability Dr. Sharon Whitton 5-12 Hofstra University Participants engage in games with dice, geometric designs, and social media. Results are modeled with Geoboards, tree diagrams and two-way tables. Activities have been shown to deepen the understanding of probability concepts.
- 8 Technology in Math Education: Desmos Mr. Joe Pastore 7-13 CUNY Queens College A brief overview of the dimensions of technology in math education will be presented. This will be followed by specific, detailed illustrations of the uses of Desmos in Pre-Algebra through Calculus.
- 9 Common Core Alg. 2: A Roundtable Discussion Mr. Jayson Kiang 9-12 Longwood HS
 Are you teaching Common Core Algebra 2? How's it going? What struggles have you encountered? What's your plan moving forward? This session will be a participant-led discussion.
- 10 Become Statistically Significant!!! Mrs. Pam O'Brien 9-12 Ward Melville HS
 This session is designed for teachers of Common Core Alg. II. Best practices and online resources will make
 experimental design, simulations, confidence intervals and statistical significance accessible to you and your students.
 Co-presenter: Theresa Kraycar
- 11 Max/Min Probs Thru Common Core Eyes Mr. Dan Goldbeck 9-12 Syosset HS Solve optimization problems using different approaches in grades 9, 10, 11, and 12.
- 12 Arrays to Polynomial Division: Build Numeracy Mr. Geoffrey Enriquez 9-12 Vanguard HS
 Introduction to number strings as a tool for building understanding of algebraic models for multiplication and division.
 The workshop will connect middle school Algebra (algebra tiles) to Algebra 2 (polynomial division).
- 13 Parametric Equations ... Awesome Curves! Mr. John Titterton 9-13 Syosset HS Retired There is so much to see and talk about when investigating parametric equations. I'll do a little of this, some of that and a lot of the other. It's all fun!
- 14 SAGE Advice: Calculus With CAS. Mr. Alvar Garcia 11-13 Baldwin SHS/NCCC Learn to use free Computer Algebra Systems on your PC.
- 15 Where Words and Numbers Meet Mr. Michael Forte General Nassau CC
 This presentation will demonstrate a unique approach to teaching word problems. Attendees will see how multi-modal approaches to problems can enable students to work within their strengths.

16 The Power of Ten: Part 1

Ms. Heidi Bromley K-4 Questar III BOCES

This session will compare the strategies of 10 that build from Pre-K through 4th grade and beyond to doubles, friendly numbers and other strategies that are more limited in scope. Rounding, area model, partial quotients, and other strategies promoted in the modules will be explored. (Part 2 will include grades 5-8)

- 17 Building Solid Foundations in Number Sense. Mr. Joseph Porzio K-4 Math Consultant EC/Elem Students are challenged to match numbers (0-10) with their number names, tally marks, tens-frame models, dominoes and real-world models. Grade appropriate language will be used to create expressions and solve simple equations.
- 18 You Can't Know All the Answers... Immediately Mr. Nicholas Restivo 5-8 Mineola UFSD Retired Energize and enrich your curriculum by encouraging students to take risks in problem solving while reminding them that a REAL problem doesn't have a quick answer. Stop "cramming" for any assessments by utilizing these methods.
- 19 So You Want to Use Technology? Mrs. Amy Longo 5-8 Wantagh Public Schools
 Participants will engage in technology based exercises that will enhance the classroom environment, and give the teacher automatic feedback to assess their student's learning.
- **20** Technology in Math Education: Geogebra Mr. Joe Pastore 7-13 CUNY Queens College A brief overview of the dimensions of technology in math education will be presented. This will be followed by specific, detailed illustrations of the uses of Geogebra in Pre-Algebra through Calculus.
- 21 Mathematics Learning using Mobile Devices Dr. Paul Pelech 7-13 Great Neck Schools
 Learn how to use the power of mobile devices to create a technology-driven mathematics classroom. This course
 covers iPads/iPhones/Android phones/tablets/netbooks. Bring a device of your choice.
- How Confident are You? Confidence Intervals Mrs. Theresa Kraycar 9-12 East Hampton UFSD How is a confidence interval created and what does it mean? What can you conclude using a confidence interval? We will demonstrate how to introduce this new Algebra II Common Core topic through hands on activities. Co-presenter: Pamela O'Brien
- Modeling the Story of Functions Ms. Ellen Falk 9-12, Pre-Service North Salem MS Modeling to engage students with Algebra CCLS and teachers with mathematical practices. Discrete and continuous examples of linear, quadratic and exponential functions will be presented. See easy, fun and cheap manipulatives.
- **24** Everything Old is New Again Mr. Michael Daly-Jones General Suffolk CC Methods that were taught many years ago to solve mathematical problems but that were lost over time will be presented. These include the extraction of a square root and a novel approach to multiplication.
- 25 Landing That First Job! Mr. Jayson Kiang Pre-service Longwood HS
 Find out what interview committees look for when hiring candidates and what to do (and NOT do) to land that first
 mathematics-teaching job!
- 26 Individual Whiteboards: Formative Assessment Ms. Robin Rann K-6 Northport/E Northport SD Individual whiteboards are a great way to build in accountability while giving all students a voice in the learning process. They increase active engagement and give the teacher immediate information about student progress. Co-presenter: Rosemary Ciccotto
- **Power of Ten: Part 2**Ms. Heidi Bromley

 5-8

 Questar III BOCES

 This session will build on the strategies of 10 utilized in grades Pre-K through 4th, and how students benefit and grow from grades 5th through 8th. Place value charts, area/tabular model applied to algebra and other strategies promoted in the modules will be explored. (Part 1 will include grades K-4)
- **28 Flipping: Increase Engagement & Performance** Ms. Krysten Malloy 5-12 Queens School of Inquiry Are you looking for a way to maximize your class time with your students, while meeting their diverse needs? We have the solution. We will demonstrate how you can flip your math class in order to excel higher-level students, while targeting struggling students.

 Co-presenter: Nicole Francipane
- 29 Hands on activities in the math class
 Use everyday household items to motivate a variety of topics in mathematics. Participants will engage in the activities and will leave with useful resources.

- 30 Challenging the Gifted Mathematicians Mr. David Linker 5-12 CUNY City College We will be looking at math contest problems that can be used to challenge and instruct gifted mathematicians in the high schools and middle schools.
- 31 Get Smarter! Take the SAT or ACT Ms. Robin Schwartz 9-12 College of Mt St Vincent The speaker retook the SAT 29 years later to relive studying and test taking, and relate better to students' experiences. In this workshop, we will dive into SAT, ACT, and TASC problems.
- 32 The Use of Arguments in H.S. Math Courses Dr. Shana Henry 9-12 James Baldwin School This presentation will include a discussion of arguing issues using mathematical analysis. Curriculum ideas will be shared with the following topics as examples: beauty, baseball, water, and public transportation.
- 33 Logic, Computers, Circuits, Electrical Networks Mr. Ronald D. Cavallaro 9-12 Molloy College Learn how the basic laws of math and logic are applied in the most complicated circuits found in science and engineering.
- 34 What Does the APP Button Do on the TI-84? Mrs. Sonja Barrera 9-12 Massapequa HS
 There are many apps already installed on the TI-84. Learn how to use these apps in your class to have your students explore concepts.
- 35 Reducing Math Anxiety in the Classroom Dr. Brian Evans General Pace University
 This presentation will address ways to reduce mathematics anxiety in the classroom. The goal of the session is for teachers to gain strategies to eliminate mathematics anxiety in their own classrooms.

SESSION D 1:45 - 2:35 (Select three workshops from numbers 36 - 50)

- 36 The Book is the Problem! Ms. Audrey Bellovin K-4 Hemlock/Garden City Using literature, this workshop will focus on encouraging students to reason through problem situations. The selected books integrate science and mathematics.
- 37 Mix 'n' Match Multiplication Models. Mr. Joseph Porzio K-4 Math Consultant EC/Elem Students are challenged to match basic facts in multiplication with real-world models. Grade appropriate language is presented: number line, array, factor, product, commutativity, and repeated addition.
- 38 Cultivating Rich Mathematical Discourse Ms. Mary Kolkhorst K-5 Syosset CSD Structuring classroom discussions that effectively lead to student insight and discovery can be challenging. Participants will engage in activities and develop strategies to support deep understanding. Co-presenter: Susan Gallagher
- 39 Is That Your Final Answer? Ms. Robin Schwartz 5-8 College of Mt St Vincent Asking questions such as "Is that your final answer?" and "How do you know?" encourages students to increase their self-awareness along with their math confidence, performance, and comprehension.
- **40** Activities that Support CC Writing Initiatives Dr. Robert Gerver 8-12 North Shore HS
 This session will present, via a 20-page packet, seven levels of activities designed to help students improve the written explanations commonly required at the end of Common Core math problems. The activities have been used by students and refined for over three decades.
- 41 Survival Guide to Teaching Common Core Ms. Amy Fetters 5-8 Roslyn MS

 Discover a new approach to Common Core that is successful and fun! Learn a lab style approach to lessons, hands-on games, collaboration, and helping students to make their own mathematical discoveries.
- 42 28 Activities for Math Classes Mr. Gregory Fisher 5-12 Mt. Tabor HS

 Come learn over 28 activities that can be adapted to any level of math from 5th grade to Calculus. Most of the activities require little preparation and turns almost any worksheet into an engaging activity.
- 43 Individual Whiteboards: Formative Assessment Ms. Robin Rann 7-12 Northport/E Northport SD Individual whiteboards are a great way to build in accountability while giving all students a voice in the learning process. They increase active engagement and give the teacher immediate information about student progress. Co-presenter: Rosemary Ciccotto

- 44 Justify Your Answer Mr. Gerald Haber 8-11 St. John's University
 An analysis of the language used in the Regents Exam in Algebra I (Common Core)
- **45 TI Tips for Regents Exam Success**Mr. Dana Morse

 9-12

 Texas Instruments

 Build math confidence with the tools from Texas Instruments. Allow students to do concept exploration and discover properties of mathematics. Topics from Alg., Geo and Alg. II covered. Presenter will bring calculators for the session.
- 46 History of Math: A Focus on Cultures Dr. Brian Evans 9-13 Pace University
 This presentation gives a brief overview of the history of math with the contributions from various cultures. It
 provides ideas for using math history to motivate students and will have participants solve historical problems.
- **47 Teaching Math Using Movies and TV Shows Dr. Elana Reiser 9-12 St. Joseph's College** Learn how to grab your students' attention by motivating lessons with movies and television shows. A series of thought-provoking activities to use in a high school mathematics classroom will be provided.
- 48 The Problem with Math is the Wording Mrs. Elizabeth Kamerer 9-12 Schreiber HS
 Analyze the wording of topics from the Common Core Algebra and Geometry curricula. Improve your questioning techniques to assist your students to be better able to solve problems where the language can be an impediment.
- **49 Mathematical Curves**Curves are everywhere from power lines to skateboard ramps to the orbits of planets and mathematics is the perfect language to describe these beautiful curves.
- **50 Quantitative Reasoning using Card Games** Mrs. Betty Berbari General SUNY/Old Westbury Use various popular card games (i.e., Set, Poker, etc.) to realize the depth at which their effect has on learning mathematics.