



2019-2020 Mathematics Workshops

For High School Teachers

arranged by Joseph G. Rosenstein and Neil D. Cooperman

sponsored by the Association of Mathematics Teachers of New Jersey (AMTNJ)

with the cooperation of DIMACS, the Center for Discrete Mathematics and Theoretical Computer Science,

and the Rutgers Department of Mathematics

Overview:

Would you like to:

- Better prepare your students for New Jersey's statewide assessments?
- Engage your students in the lessons that you teach?
- Learn more mathematics content that is relevant to your classroom?
- Incorporate standards-based hands-on activities that motivate your students?
- Relate what you are doing in the classroom to "real world" applications?

Twenty-seven, highly interactive, one-day professional development workshops for high school math teachers are offered during the 2018-2019 school year. These workshops address a broad range of topics that are applicable to all curricula taught by grades 9-12 teachers of mathematics.

These workshops are sponsored by the [Association of Mathematics Teachers of New Jersey](#) (AMTNJ) with the cooperation of [DIMACS](#) (the Center for Discrete Mathematics and Theoretical Computer Science) and the [Rutgers Department of Mathematics](#).

There are workshops on every area of high school mathematics -- algebra, geometry, trigonometry, precalculus, calculus, probability, statistics, and discrete mathematics -- as well as cross-content workshops on mathematics instruction and applications.

All workshops are connected to New Jersey's state standards in mathematics. All of these workshops will help you better prepare students for the statewide assessments and provide the resources and knowledge that you need to generate new and exciting standards-based lessons.

All workshops are full-day workshops at which participants will earn six (6) professional development hours. All workshops will take place on the Busch Campus of Rutgers University-New Brunswick. Participants may attend single or multiple workshops in any order.

The fee for each full-day workshop (except for the March 20 Precalculus Conference) is \$205 (\$10 discount for each online registration). Discounts are available for multiple registrations on a single purchase order. Conference or workshop registrations include eMembership in AMTNJ through December 31, 2020.

Although some workshops address overlapping issues, teachers who attend multiple workshops will benefit from experiencing the different approaches workshop leaders have to helping students meet the challenges of the state standards and assessments. Our instructors are among the most experienced and respected workshop leaders in the state. The workshop topics are based on feedback and recommendations from New Jersey teachers and administrators.

You will leave these workshops with valuable tools to motivate your students, stimulate their curiosity, and promote a more positive attitude towards mathematics.

Workshop Titles (in chronological order):
(scroll down for workshop descriptions in alphabetical order)
(all workshops begin at 9:00 am)

- **Get Smarter! Take the SAT or ACT, Grades 9-12**
Date: Tuesday, December 3, 2019 (Code: W-12-03-19)
Presenter: Robin Schwartz
- **So You Want to Start a Discrete Math Course?, Grades 9-12**
Date: Tuesday, December 10, 2019 (Code: W-12-10-19)
Presenter: Joseph Rosenstein
- **Is That Your Final Answer? Developing Mathematical Thinking with Questions, Grades 6-12**
Date: Friday, December 13, 2019 (Code: W-12-13-19)
Presenter: Robin Schwartz
- **A Day with the SAT, Grades 9-12**
Date: Tuesday, January 7, 2020 (Code: W-01-07-20)
Presenter: John Kerrigan
- **A Visual-Spatial Approach to Achieving Success in Algebra, Grades 6-9**
Date: Wednesday, January 8, 2020 (Code: W-01-08-20)
Presenter: Angelo DeMattia
- **How to Use NAEP in the Classroom, Grades 4-12**
Date: Friday, January 17, 2020 (Code: W-01-17-20)
Presenter: Liz Marquez
- **Equitable Mathematics Instruction and Teaching Mathematics for Social Justice, Grades K-12**
Date: Thursday, January 30, 2020 (Code: W-01-30-20)
Presenter: Mark Russo
- **Changing the Pathways for Math, Grades 6-12**
Date: Friday, January 31, 2020 (Code: W-01-31-20)
Presenter: Jennifer Goforth
- **Intervention Strategies for Struggling Learners in Mathematics, Grades 6-9**
Date: Monday, February 3, 2020 (Code: W-02-03-20)
Presenter: Irina Lyublinskaya
- **Tips for Math Coaches, Math Supervisors, and Math Leaders, Grades K-12**
Date: Wednesday, February 5, 2020 (Code: W-02-05-20)

Presenter: Angelo DeMattia

- **Flipping the Classroom in Math for Teachers, Grades 6-12**
Date: Friday, February 7, 2020 (Code: W-02-07-20)
Presenter: Jennifer Goforth
- **Teaching and Learning Mathematics in the 21st Century through the Use of Technology, Grades 6-12**
Date: Friday, February 14, 2020 (Code: W-02-14-20)
Presenter: Coshetty Vargas
- **Differentiating Mathematics Instruction in the Secondary Classroom, Grades 7-12**
Date: Tuesday, February 18, 2020 (Code: W-02-18-20)
Presenter: Dianna M. Sopala
- **Making Learning Visual in the Algebra, Geometry and Trigonometry Classroom, Grades 7-12**
Date: Wednesday, February 19, 2020 (Code: W-02-19-20)
Presenter: Dianna M. Sopala
- **Formative Assessment with Web-Enabled Devices, Grades 9-12**
Date: Monday, February 24, 2020 (Code: W-02-24-20)
Presenter: Irina Lyublinskaya
- **Symphony of Math, Grades 6-12**
Date: Monday, March 2, 2020 (Code: W-03-02-20)
Presenter: John Kerrigan and Jennifer Martins
- **Spurring the Imagination in Reasoning with Fun/Non-routine Math Problem, Grades 9-12**
Date: Wednesday, March 4, 2020 (Code: W-03-04-20)
Presenter: Angelo DeMattia
- **Active Learning in Secondary Mathematics, Grades 6-12**
Date: Tuesday, March 17, 2020 (Code: W-03-17-20)
Presenter: John Kerrigan
- **Precalculus Conference: Good Ideas in Teaching Precalculus and....**
Date: Friday, March 20, 2019 (Code: PRECALC-20)
Audience: Grade 9-14 Mathematics Teachers, Mathematics Supervisors

A dynamic, annual, one-day conference for teachers and supervisors of high school mathematics, now in its 34th year. Attend up to 4 sessions on diverse topics, plus a sharing session and plenary session. Take some really good ideas back to the classroom! For more information, see conference website – <http://dimacs.rutgers.edu/archive/precalf-conf/>

- **Empowering Students Who Ask, “When Are We Ever Going to Use This Math?”, Grades 6-12**
Date: Friday, March 27, 2020 (Code: W-03-27-20)
Presenter: Robin Schwartz
- **Teaching and Learning in a Heterogeneous Class: “Is it really possible?”, Grades 9-12**
Date: Thursday, April 2, 2020 (Code: W-04-02-20)
Presenter: Judith T. Brendel

- **Differentiated Instructional Strategies for Teaching Math, Grades 7-12**
Date: Friday, April 3, 2020 (Code: W-04-03-20)
Presenter: Jennifer Goforth
- **Creative Differentiated STEAM Projects for Middle and High School, Grades 5-12**
Date: Friday, April 17, 2020 (Code: W-04-17-20)
Presenter: Coshetty Vargas
- **Teaching Algebra, Precalculus and Calculus with GeoGebra, Grades 9-12**
Date: Monday, April 27, 2020 (Code: W-04-27-20)
Presenter: Irina Lyublinskaya
- **Principles of Effective Use of Technology in Teaching Mathematics, Grades 9-12**
Date: Monday, May 4, 2020 (Code: W-05-04-20)
Presenter: Irina Lyublinskaya
- **Precalculus and Astronomy: A Match Made in the Heavens!, Grades 10-12**
Date: Wednesday, May 13, 2020 (Code: W-05-13-20)
Presenter: Ira Nirenberg
- **Physics for Math Teachers, Grades 9-12**
Date: Friday, May 15, 2020 (Code: W-05-15-20)
Presenter: Ira Nirenberg
- **Nothing but Desmos, Grades 7-12**
Date: Tuesday, May 19, 2020 (Code: W-05-19-20)
Presenter: Eric Milou
- **Reinventing & Reimagining the High School Mathematics Classroom, Grades 9-12**
Date: Wednesday, May 20, 2020 (Code: W-05-20-20)
Presenter: Eric Milou

Workshop Descriptions (in alphabetical order):

- **A Day with the SAT, Grades 9-12**

Date: Tuesday, January 7, 2020 (Code: W-01-07-20)

Time: 9:00 am – 3:30 pm

Presenter: John Kerrigan

Audience: Grades 9-12 Mathematics Teachers and Supervisors

Participants will examine the mathematics content on the SAT, and actually immerse themselves in a full-length math SAT. Implications for the secondary curriculum will be discussed, along with essential concepts and strategies needed to ensure students' success.

- **A Visual-Spatial Approach to Achieving Success in Algebra, Grades 6-9**

Date: Wednesday, January 8, 2020 (Code: W-01-08-20)

Time: 9:00 am - 3:30 pm

Presenter: Angelo DeMattia

Audience: Grades 6-9 Mathematics Teachers, Mathematics Supervisors

All math teachers are looking for ways to deepen the algebraic knowledge base of their students. Did you know that developing more visually based lessons that also highlight spatial thinking will help reach that goal?

Research has shown that visual/spatial thinking is a predictor of success in STEM, and that this emphasis will create increased opportunities for students, including SE & ELL – to make an effective transition from the concrete/visual to the abstract notions of algebra. The emphasis will be on applying the PAW process: P is for Pictures, A is for Algebra, and W is for words. Ample hands-on visual/spatial lessons will highlight the process that will help your students attain a higher level of achievement on PARCC Assessments as well as to prepare them for college and careers. Time will also be reserved for sharing lesson ideas as well as attending to your questions/concerns. Bring a laptop and graphing calculator.

- **Active Learning in Secondary Mathematics, Grades 6-12**

Date: Tuesday, March 17, 2020 (Code: W-03-17-20)
Time: 9:00 am – 3:30 pm
Presenter: John Kerrigan
Audience: Grades 6-12 Mathematics Teachers and Supervisors

In Middletown Township Public Schools, we have built five “active learning spaces,” similar to those at Rutgers University. This session will discuss what an active learning space is and the research that supports mathematics learning that is active. Participants will learn about the teaching tools and methods needed to teach with an active learning mindset. All class aspects will be discussed, from the start of the year, to lessons, explorations, assessment, review activities, and homework.

- **Changing the Pathways for Math, Grades 6-12**

Date: Friday, January 31, 2020 (Code: W-01-31-20)
Time: 9:00 am – 3:30 pm
Presenter: Jennifer Goforth
Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

Conversations around course sequencing in math to increase equity to access for high level math, supporting teachers and closing the achievement gap.

- **Creative Differentiated STEAM Projects for Middle and High School Students, Grades 5-12**

Date: Friday, April 17, 2020 (Code: W-04-17-20)
Time: 9:00 am – 3:30 pm
Presenter: Coshetty Vargas
Audience: Grade 5-12 Mathematics Teachers, Mathematics Supervisors

Teachers will explore, create and use sample STEAM projects to differentiate various levels within the common core standards of middle and high school students. Meaningful STEAM projects include tessellations, house scale drawings, magic squares, 3D paper models and others...

- **Differentiated Instructional Strategies for Teaching Math, Grades 7-12**

Date: Friday, April 3, 2020 (Code: W-04-03-20)
Time: 9:00 am – 3:30 pm
Presenter: Jennifer Goforth
Audience: Grades 7-12 Mathematics Teachers, Mathematics Supervisors

This workshop is focused on differentiation, including strategies for teaching math to classified students, how to apply these strategies and how to anticipate issues.

- **Differentiating Mathematics Instruction in the Secondary Classroom, Grades 7-12**

Date: Tuesday, February 18, 2020 (Code: W-02-18-20)
Time: 9:00 am – 3:30 pm

Presenter: Dianna M. Sopala

Audience: Grades 7-12 Mathematics Teachers and Supervisors

Meeting student needs can be challenging in a mathematics classroom. While students struggle with the mathematical concepts, teachers struggle with finding ways to ensure ALL students learn and fully understand the material. In this workshop, teachers will learn how to accommodate student differences. Since all students are different, instruction for all students should be different. Students should have a choice (access) to all modalities of instruction. The following effective differentiate instruction elements are big ideas, prior assessment, and choice will be investigated by the participants. It is recommended that teachers bring a laptop, curriculum guides, and open mind. Teachers will leave the workshop with the tools to differentiate mathematics instruction and be able to implement those strategies tomorrow.

- **Empowering Students Who Ask, “When Are We Ever Going to Use This Math?”, Grades 6-12**

Date: Friday, March 27, 2020 (Code: W-03-27-20)

Time: 9:00 am – 3:30 pm

Presenter: Robin Schwartz

Audience: Grades 6-12 Mathematics Teachers and Supervisors

When Math is presented as a life skill that broadens career choice and inspires critical thinking, students embrace the learning of reasoning and problem-solving skills while building confidence and persistence. While many students will not major in science or engineering in college, all students benefit from the challenge and discipline of Math. This positive attitude can help teachers, administrators and students to meet the challenges of “teaching to the test” by viewing it as an opportunity to address common errors and misunderstandings without formally reviewing. In fact, the comparison of multiple-choice answers can help students to “think on their feet” while increasing accuracy, logic and frustration tolerance skills & assets in high school, college and the workplace. Worksheets will cover common secondary content incorporating HSPA and SAT content (including algebra, geometry, trig and precalc) and will use multiple representations and technology to appeal to diverse learning styles creating a path to success for all.

- **Equitable Mathematics Instruction and Teaching Mathematics for Social Justice, Grades K-12**

Date: Thursday, January 30, 2020 (Code: W-01-30-20)

Time: 9:00 am – 3:30 pm

Presenter: Mark Russo

Audience: Grades K-12 Mathematics Teachers and Supervisors

This session will have two primary goals: (1) to consider equitable teaching practices that can help support students’ mathematical identities and agency, and (2) to explore social justice topics that can be incorporated into mathematics curricula. Participants will explore lessons at various grade levels, and they will reflect on how to support equity and social justice work in their spheres of influence. Resources will be provided for ongoing support.

- **Flipping the Math Classroom, Grades 6-12**

Date: Friday, February 7, 2020 (Code: W-02-07-20)

Time: 9:00 am – 3:30 pm

Presenter: Jennifer Goforth

Audience: Grades 6-12 Mathematics Teachers and Supervisors

Are you looking for ways to integrate technology in the classroom effectively? Do you want to increase the number of students completing homework? Then Flipping the Classroom may be a strategy you want to implement in your classes. This workshop will provide a framework for flipped learning- where students watch instructional videos for homework and do the practice in class. Please bring your laptop.

- **Formative Assessment with Web-Enabled Devices, Grades 9-12**

Date: Monday, February 24, 2020 (Code: W-02-24-20)
Time: 9:00 am – 3:30 pm
Presenter: Irina Lyublinskaya
Audience: Grades 9-12 Mathematics Teachers and Supervisors

In this interactive session you will learn about various ways mobile technology can be used to support students' mathematics learning through free APPs and internet-based tools for mobile devices. Bring your own mobile device.

- **Get Smarter! Take the SAT or ACT!, Grades 9-12**

Date: Tuesday, December 3, 2019 (Code: W-12-03-19)
Time: 9:00 am – 3:30 pm
Presenter: Robin Schwartz
Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

The speaker took the new SAT in May 2019 adding to her test experiences :SAT (2016), ACT (2012), "old" SAT (2009) and "ancient" SAT(1980). These recent exam experiences helped her to relive studying and test taking, fill gaps in her education, and relate better to students' experiences. Studying for the ACT/SAT helps students learn the content they need to successfully complete high school and/or avoid remediation. We will also discuss and profile examples of the SAT/ACT/ACCUPLACER Math and show how improvement on these exams can help students (and adults alike) gain a new outlook and self-identity.

- **How to Use NAEP in the Classroom, Grades 4-12**

Date: Friday, January 17, 2020 (Code: W-01-17-20)
Time: 9:00 am – 3:30 pm
Presenter: Liz Marquez
Audience: Grade 4-12 Mathematics Teachers, Mathematics Supervisors

NAEP stands for the National Assessment of Educational Progress or, more simply, The Nation's Report Card. Many teachers have never heard of NAEP and yet it has vast resources for educators. The workshop will familiarize teachers with those vast resources and how to use them to enhance classroom instruction and assessment.

- **Intervention Strategies for Struggling Learners in Mathematics, Grades 6-9**

Date: Monday, February 3, 2020 (Code: W-02-03-20)
Time: 9:00 am – 3:30 pm
Presenter: Irina Lyublinskaya
Audience: Grade 6-9 Mathematics Teachers, Mathematics Supervisors

In this workshop participants will learn about specific research-based recommendations to address the needs of struggling learners in math; discuss how to carry out each recommendation; review examples illustrating specific intervention strategies for different recommendations, and develop strategies based on these recommendations for teaching specific topics of elementary school mathematics.

- **Is That Your Final Answer? Developing Mathematical Thinking with Questions, Grades 6-12**

Date: Friday, December 13, 2019 (Code: W-12-13-19)
Time: 9:00 am – 3:30 pm
Presenter: Robin Schwartz
Audience: Grade 6-12 Mathematics Teachers, Mathematics Supervisors

Asking questions such as "Is that your final answer?", "How do you know?" and "Easy, Medium, Hard?" encourages students to increase their self-awareness along with their math confidence, performance, and comprehension. This workshop will include CCSS Standards especially #1 (make sense of problems and persevere in solving them) and #6 (attend to precision). We will design and demo inquiries using PARCC samples and other released items to inspire classroom dialogue, lesson plans and student learning.

- **Making Learning Visual in the Algebra, Geometry and Trigonometry Classroom, Grades 7-12**

Date: Wednesday, February 19, 2020 (Code: W-02-19-20)
Time: 9:00 am – 3:30 pm
Presenter: Dianna M. Sopala
Audience: Grades 7-12 Mathematics Teachers and Supervisors

Our students are the YouTube, Netflix, and playing video games generation. Why are we still teaching them the same way as teachers taught students 50 years ago? Students are more engaged in a highly collaborative, active, and visual mathematics classroom. Participants will learn some strategies to teach students to effectively collaborate, visualize Algebra and Trigonometric concepts and to bring stagnant Geometry diagrams to life through videos and animation. Teachers will learn how to create lessons to inspire and ignite the spark for learning mathematics in all students. Lessons can be used during the teacher's next class period.

- **Nothing but Desmos, Grades 7-12**

Date: Tuesday, May 19, 2020 (Code: W-05-19-20)
Time: 9:00 am – 3:30 pm
Presenter: Eric Milou
Audience: Grade 7-12 Mathematics Teachers, Mathematics Supervisors

Come enjoy this workshop on the free online graphing calculator desmos. We will explore all of its features from animating objects and functions, creating lessons and assessments (on teacher. desmos), working with the new desmos geometry platform and even exploring the link between art and math.

- **Physics for Math Teachers, Grades 9-12**

Date: Friday, May 15, 2020 (Code: W-05-15-20)
Time: 9:00 am – 3:30 pm
Presenter: Ira Nirenberg
Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

Historically, the basis for a good deal of secondary mathematics stems from the development of physics. In fact, Isaac Newton invented the calculus in order to solve problems relating to the gravitational force produced by extended bodies in space (namely, the Earth). Our focus here is very basic. Participants will gain a conceptual and mathematical understanding of the physics used in the secondary curriculum. The course is a basic physics college class with mathematics teachers in mind. No previous physics education is necessary. If you had physics a long time ago and remember little to nothing or have never had a physics class, this is for you! Stress level for this class is rated as ZERO! Knowledge of a TI graphing calculator is helpful but not necessary. Topics include: measurements and uncertainty, dimensional analysis, kinematics, and dynamics. This workshop addresses CORE concepts! Please bring a calculator, or any equivalent.

- **Precalculus and Astronomy: A Match Made in the Heavens, Grades 10-12**

Date: Wednesday, May 13, 2020 (Code: W-05-13-20)
Time: 9:00 am – 3:30 pm
Presenter: Ira Nirenberg
Audience: Grade 10-12 Mathematics Teachers, Mathematics Supervisors

Where and when do you look for the moon? How was the earth's position in space determined 2,500 years ago?

Want to go to Mars? There's prep to every trip! This class will explore these and other ideas. Why? Because they get students' attention! I've tried everything from temperature, to tides, to Ferris Wheels, and overall, the response was lackluster. Then I started using astronomical ideas and things changed. No more inputting arrays of data and forcing out context, rather, we observe and model! This workshop addresses CORE concepts! Please bring a graphing calculator, or any equivalent.

- **34th Annual Precalculus Conference: Good Ideas in Teaching Precalculus and....**

Date: Friday, March 20, 2020 (Code: PRECALC-20)

Time: 8:30 am – 3:00 pm

Fee: \$175

Audience: Grades 9-14 Mathematics Teachers, Mathematics Supervisors

A dynamic, annual, one-day conference for teachers and supervisors of high school mathematics, now in its 31st year. Attend up to 4 sessions on diverse topics, plus a sharing session and plenary session. Take some really good ideas back to the classroom! For more information, see conference website – <http://dimacs.rutgers.edu/archive/precalc-conf/>

- **Principles of Effective Use of Technology in Teaching Mathematics, Grades 9-12**

Date: Monday, May 4, 2020 (Code: W-05-04-20)

Time: 9:00 am – 3:30 pm

Presenter: Irina Lyublinskaya

Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

Introduction of new technologies raised the importance of certain ideas, made some problems and topics more accessible, and provided new ways to represent and handle mathematical information, affording choices about content and pedagogy that we've never had before. But such choice imposes the burden of judgment. Not everything that can be done should be done. But what is good use? In this section we will analyze principles for effective use of technology in order to help you decide on whether, when, and how to use computers or calculators, and how to maximize the gains and minimize the risks of their use.

- **Reinventing & Reimagining the High School Mathematics Classroom, Grades 9-12**

Date: Wednesday, May 20, 2020 (Code: W-05-20-20)

Time: 9:00 am – 3:30 pm

Presenter: Eric Milou

Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

Today, it seems as if nearly everyone agrees that mathematics (especially high school math) needs to change. For far too long, mathematics has not worked for far too many students. Mathematics has not changed substantially in my lifetime, nor has it changed substantially for most students, teachers & schools. It is clearly an issue, and it is time to discuss and make serious changes. This session will discuss realistic steps that the math community must take including creating math pathways for high school students and a focus on modeling tasks.

- **So You Want to Start a Discrete Math Course?, Grades 9-12**

Date: Tuesday, December 10, 2019 (Code: W-12-10-19)

Time: 9:00 am – 3:30 pm

Presenter: Joseph Rosenstein

Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

Are you tired of pushing all students into Algebra II, which many will never need or use, and in which they will not be successful? Looking for an alternative? In this workshop we will look at some of the topics that can be included in a discrete math course for high school students, and discuss possible ways in which these topics can be combined into a course. Full disclosure: The workshop leader has written a discrete math textbook that is

designed for high school students.

- **Spurring the Imagination in Reasoning with Fun/Non-routine Math Problems, Grades 9-12**

Date: Wednesday, March 4, 2019 (Code: W-03-04-20)

Time: 9:00 am – 3:30 pm

Presenter: Angelo DeMattia

Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

How do we know our intuition has failed us? We are aware that some problems just don't follow our brains' wiring, but how do we know when this happens? Let's explore some fun, puzzling, and challenging problems in order to begin the process of fine-tuning our reasoning skills - such as the Monte Hall Problem - and simultaneously connect to the CCSS and the Big Ideas in Math – including Number Sense, Probability, and other areas of mathematics. Possibly may help with the SATs? Come and find out!

- **Symphony of Math, Grades 6-12**

Date: Monday, March 2, 2020 (Code: W-03-02-20)

Time: 9:00 am – 3:30 pm

Presenter: John Kerrigan and Jennifer Martins

Audience: Grades 6-12 Mathematics Teachers and Supervisors

Are you tired of hearing “when will I use this again” or “another worksheet”? Do you want to spark your students' interest in mathematics through real-world problem solving? If so, then come to this interactive, hands-on workshop. We will show you how to create purposeful learning activities which not only emphasize math discourse but also empower your students to become independent, creative, and engaged problem solvers in math. Strategies, activities and resources for daily lessons for 6th-grade math through Calculus will be shared and discussed.

- **Teaching Algebra, Precalculus and Calculus with GeoGebra, Grades 9-12**

Date: Monday, April 27, 2020 (Code: W-04-27-20)

Time: 9:00 am – 3:30 pm

Presenter: Irina Lyublinskaya

Audience: Grade 9-12 Mathematics Teachers, Mathematics Supervisors

In this session you will learn how you can use GeoGebra effectively in high school mathematics from algebra to calculus. This free multi-platform software/APP will engage your all your students in dynamic explorations, problem solving, and doing math! Learn about new Augmented Reality feature and exam mode. Bring your own computer to fully participate.

- **Teaching and Learning in a Heterogeneous Class: “Is It Really Possible?”, Grades 9-12**

Date: Thursday, April 2, 2020 (Code: W-04-02-20)

Time: 9:00 am – 3:30 pm

Presenter: Judith T. Brendel

Audience: Grades 9-12 Mathematics Teachers and Supervisors

In many districts students and parents are now permitted to select the course-level of their choice, even if it is not the student's recommended placement. Math teachers are faced with new challenges. How can we, as caring, dedicated professional educators, teach students at different levels of understanding and backgrounds at the same time? Can we realistically meet the needs of each student and NJSL (New Jersey Student Learning Standards)? Have fun while you learn and experience a range of effective instructional and learning strategies with specific activities to keep students motivated, engaged, learning and succeeding. Select what is best for different Tier-level students. Yes, we can meet their needs. Leave with a wealth of ready-made original material to use now and with digital access to modify later. Participants are encouraged to bring a digital device such as a

laptop or tablet.

- **Teaching and Learning Mathematics in the 21st Century through the Use of Technology, Grades 6-12**

Date: Friday, February 14, 2020 (Code: W-02-14-20)
Time: 9:00 am – 3:30 pm
Presenter: Coshetty Vargas
Audience: Grade 6-12 Mathematics Teachers, Mathematics Supervisors

Teachers will use laptops / iPads to explore various instructional strategies of our evolving classrooms of the 21st century by incorporating valuable websites and apps that encourage the use of meaningful engaging activities to enhance technology use and learning in the classroom. Teachers are not limited to just using these technology tools but also involve your students to create their own personal activities such as generating QR codes, creating their own video or a game from an interactive educational website.

- **Tips for Math Coaches, Math Supervisors, and Math Leaders, Grades K-12**

Date: Wednesday, February 5, 2020 (Code: W-02-05-20)
Time: 9:00 am – 3:30 pm
Presenter: Angelo DeMattia
Audience: Grades K-12 Mathematics Teachers, Mathematics Supervisors

How can Math teachers be supported on their journey to provide quality learning for their students? This workshop will help you to explore various support structures in attaining the above goal. If you are new to math leadership, this session will help clarify this enormous task and help you to gain confidence as where to begin – especially in supporting teachers in their implementation of the mathematical practices and understanding the intent of conceptual understanding and how it supports retention and procedural fluency. If you are experienced, this session will help you rethink the menu and polish your training. Ultimately, you will improve as a knowledgeable practitioner, capable of using your extensive math understanding and teaching experiences to help children from varied cultural backgrounds become convincing math learners. Time will be reserved – on a continual basis – for sharing leadership dilemmas, solutions, and ideas, as well as examining effective math lessons. Bring a laptop.

Registration Information

Payment Information

To encourage implementation at your school, we are offering discounts to schools or districts that send multiple registrations on a single purchase order and to individuals who sign up for four (4) or more workshops.

1-3 Workshop Registrations = \$205 each

4-9 Workshop Registrations (one or more individuals) = \$175 each (15% discount)

10 or more Workshop Registrations (one or more individuals) = \$155 (25% discount)

THERE IS A \$10 DISCOUNT FOR EACH ONLINE REGISTRATION. Payment still can be made via a purchase order provided that each attendee's registration has been submitted individually online. Online registration significantly reduces transcription errors on contact information.

Workshop fees include all materials.

Payment may be made by purchase order or personal check; purchase orders and/or checks should be made out to **AMTNJ (Association of Mathematics Teachers of New Jersey)** and mailed to the address below. Admittance to the workshop may be denied if no payment method is submitted by the day of the workshop or if billing information is not

completed.

Registration Information

You can register by:

Phone: (732) 788-1257 from Monday through Friday, from 9:30 a.m. to noon.

Online: <http://tinyurl.com/AMTNJ-DIMACS-2019-2020>

FAX: FAX Registration Form to (732) 399-5388, 24-hours a day.

Mail: Send Registration Form to:

AMTNJ/DIMACS K-12 Math Workshops
PO Box 366
Saddle River, New Jersey 07458

Questions: amtnj@juno.com

Please do not assume that your district is registering for you; they often fail to notify us that teachers are planning to attend. Please register with us and tell us that your district will be sending additional materials; we will then be able to send you a confirmation letter.

Once your registration is received, you will receive an email confirmation letter at least 10 days before your workshop; attached to this letter will be a map, directions, and parking information.

If you have not received a confirmation letter 10 days prior to your workshop, please call 732-788-1257 to confirm that your registration has been received and that the workshop will take place.

[Click here for Registration Form](#)

[Click here to Register Online](#)

Cancellation Policy

A full refund (minus a \$25 processing fee per registrant) will be issued to the appropriate party if this office is notified **in writing** at least five (5) business days prior to the workshop date. If you cancel within five (5) business days, or if neither you nor a substitute attend the workshop without notifying us, no refund will be issued.

All workshops are subject to cancellation for insufficient enrollment.

If you register less than one week before the conference, you may not be registered because of over enrollment or because the workshop has been canceled. Please contact our office to verify that your registration has been processed, that you are indeed registered, and that the workshop has not been canceled.

In case of any emergencies, please contact Neil Cooperman, DIMACS Coordinator at NCoop@att.net

To obtain information about other programs, call 732-788-1257 or visit the AMTNJ website at <http://www.amtnj.org>

