11th Mathematics Connection Conference

May 2-10, 2018

Hosted by

The School of Education

In collaboration with

The Murphy Institute

LEAP to Teacher Program, and

the United Federation of

Teachers

Dr. Kenneth Gold, Dean of School of Education

Dr. Margaret E. Bérci, Dept. Chair of Curriculum and Instruction

Dr. Nelly Tournaki, Acting Dept. Chair of Educational Studies

Program Chair and Conference Director: Dr. Judit Kerekes, Associate Professor of Mathematics Education

Elegant Solutions from Europe's Elementary and Middle School Students with GeoGebra

Dr. Eleonóra Stettner,
Chairperson of Mathematics and Informatics Department,
Kaposvár University, Hungary

Abstract:

The GEOMATECH project in Hungary 2015 includes teachers' training and the development of teaching material, but also national competitions for Hungarians living in and outside Hungary. We prepared tasks for six different age groups, between 6 and 18 year - old students. Groups of 1 – 5 persons could participate in the competition. There were competition rounds for 9 months, and each round had a central topic.

We asked the upper primary school and the grammar school students to keep a diary. Looking back it proved to be a very useful idea, although it wasn't easy for the children to formulate the explanation and the discussion. But on the one hand, it was useful because this way they are getting used to write down their thoughts, and on the other hand, we received a lot of useful comments in connection with the competition and with GG. Moreover, from the diaries we can see that while understanding and solving the tasks, the children had to cooperate, argue, communicate and help each other.

In my presentation I would like to speak about the experience of the competition and to show same interesting and beautiful solutions.

Interactive Activities for Teachers with GeoGebra.

Dr. Eleonóra Stettner, Chairperson of Mathematics and Informatics Department, Kaposvár University, Hungary

Dr. Judit Kerekes, Associate Professor of Math Education, College of Staten Island

Abstract:

In some rounds of the GEOMATECH competition the children's task was not to solve a traditional mathematical problem; instead, they could create freely using the tool system of GeoGebra. During the solution of these creative tasks the participants mobilized much deeper mathematical knowledge than they would have done

with a traditional mathematical problem.

During the workshop, together we are going to make the most exciting creations of the free creative rounds, the problems which illustrate of the connection between mathematics and arts and some interesting maybe funny tasks, which utilize the most dynamic opportunities of GeoGebra.

Keynote lecture:

Catching Einstein's Elusive Waives

Dr. Zsuzsa Márka,
Research Scientist, Columbia University, USA

Abstract:

The presentation will highlight the Advanced LIGO's through the discovery of gravitational waves on the 100th anniversary of Einstein's prediction. Beyond this extraordinary discovery, a discussion will note the growing focus on incorporating gravitational waves as a new window on questions from violent cosmic transients to cosmology. During the presentation we will discuss some aspects of (i) the instrumental breakthroughs that enabled the unprecedented sensitivity reached by

Advanced LIGO and (ii) the key scientific directions in which gravitational wave searches are being utilized, directly as well as in the context of multi-messenger astronomy.

Explore Practices that Promote Mathematical Discourse of Measurement

Dr. Judit Kerekes, Associate Professor of Mathematics Education, College of Staten Island

Abstract:

Mathematics is a human activity. During the history people used body parts as measurement units. For example the Egyptians used the cubit to build pyramids. Come to this section to explore practices that promote mathematical discourse of measurement. Realize what happened after 1789 July 14th, during the French Revolution. Why was so important to construct a unit, which one is the same all over the world? What they chose? What is one ten-millionth of the

distance from the equator to the North Pole? This section will present an overview that is easy to implement in teaching-learning practices that build cleverness ability, deepen conceptual understanding, and inspire confidence for mathematics (Lyublinskaya & Kerekes, 2011). This presentation will help you to develop confidence and excitement about teaching STEM. You will leave the section with an inquiry based, ready to use activity for your students in your classroom.

Josephine Cuttitta-Ruggiero, Substitute Teacher NYC DOE

Rubik's Cube Competition

Abstract:

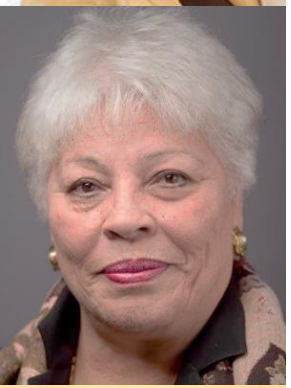
Students can use their cognitive skills to manipulate the cube, so that the colors match. Their cognitive memory and knowledge skills become very challenging for the students.

Playground for Young Children

Abstract:

Colleagues and Students can bring their children to the playground to play together. The playground is a community place where children can learn mathematical skills while playing.

FORUM



Strengthening Teacher-Paraprofessional Collaborations in Classroom

Dr. Nelly Tournaki, Chair of Educational Studies, Panel Discussion Leader

Iris DeLutro, CUNY-Wide LEAP to Teacher Program Manager, Murphy Institute

Dr. Tünde Jakab, LEAP to Teacher Program Site Coordinator

Abstract:

This is a solution-driven workshop that seeks to identify best practices and issues that need to be addressed to strengthen paraprofessional and teacher collaboration in the classroom. Participants will be encouraged to share their experiences and most importantly provide recommendations. Groups will be formed to explore various issues and a presenter from each one will report the findings of their experience. Attendees' shared experiences and group outcomes will be disseminated to stake holders including teacher preparation programs and the union. Please join us for this important discussion.

The Rocky Road to Algebra

Ms. Danielle Iacoviello, PS/IS 48 Grade 5th math teacher and math coach.

Ms. Drita Lazoja, IS 27 Grade 6 math teacher.

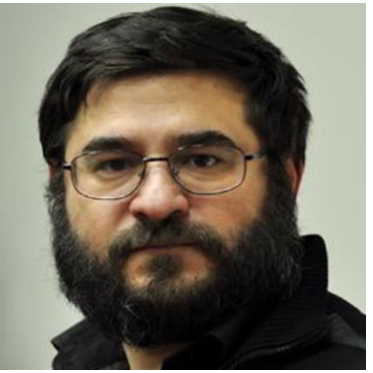
Ms. Eunice Miller, PS 69 Peer Collaborative Teacher and Grades 3-5 math teacher.

Ms. Patty Brady, PS 65 Grade 5 math teacher and math coach.

Abstract:

We're excited to tell you about a new initiative between the NYC Department of Education and CUNY that will bring teachers together to bridge the gap and build mathematical knowledge amongst elementary and middle school classrooms. This initiative strives to increase student success in Algebra I and beyond.

Some of us started our higher learning at the CSI School of Education and have returned to embark on this journey. We are currently enrolled in EDM 603 here at the College of Staten Island with Professor Donoghue and Professor Kerekes. The courses are focused on Grades 5-8 Mathematics and how they transition to Algebra I.



Math Cafe

Dr. Mikhail Epshteyn,
Associate Professor of STEM Edu. CSI

Sergey Mikhelson,
Math teacher, LREI School, New York City

Abstract:

Math Cafe is an edutainment strategy, which allows students to strengthen their problem solving skills, while having fun from a non-traditional format. The cafe promotes group work, gives everyone opportunity to get engaged in a curious intellectual activity. The Cafe format may be used for in-class assessment, or as a motivation game.

From the announcement of the mathematical cafe:

“Mathematics Cafe is a place, where your brain takes delight in intellectual cuisine the same way your stomach enjoys culinary masterpieces at a regular restaurant. Are you intellectually hungry? Are looking for food to tease your curiosity? Are you in search of new formats to make math more enjoyable for your students and/or friends? If so, you are cordially invited to visit our Math Café, where your brain takes delight in problem solving cuisine the same way your stomach enjoys culinary masterpieces at a regular restaurant.

We offer a large variety of items on our menu, ranging from traditional main course (problems that anyone will most likely solve) to some delicacies (brain teasers and more elaborated problems). Come and try our desserts and appetizers, allow yourself to satisfy your intellectual hunger!”

Engaging Elementary School Students in Math Learning with GeoGebra.

Dr. Irina Lyublinskaya, Professor of STEM Education, CSI

Abstract:

Come to learn how you can use GeoGebra in your classes to teach geometry topics to students in grades 1-5. This free multi-platform software/APP will engage your students in dynamic explorations, problem solving and doing math!

$$\frac{e^x - 1 - x}{\quad}$$

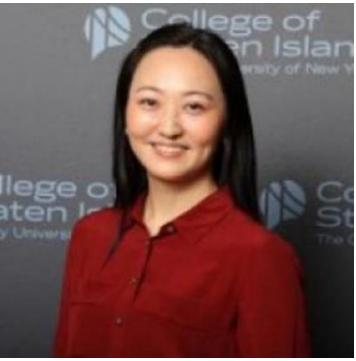
$$1) = \lim_{x \to 0} x(e^x - 1$$

$$)' = \frac{1}{u} \cos x = \frac{\cos x}{\sin x} =$$

$$+ \lim_{u \to 0} \int_{u}^{\cdot} f(x)\,dx$$

$$= \left\{\frac{0}{0}\right\} = \lim_{x \to 0} \frac{4x}{\operatorname{tg} 2\pi x}$$

$$x^i y \quad a \sum x^{\cdot} + pn = \sum$$



Connections to Mathematics Literature and Storytelling in the Early Childhood Classroom

Dr. Ting Yuan, Assistant Professor of Early Childhood Education, CSI

Dr. Judit Kerekes, Associate Professor of Mathematics Education, CSI

Abstract:

The graduate students will present the story or fairy tale they wrote for children. The children will help the main character of the story to solve mathematical problems in order to achieve the dream. As the main character in the fairy tale gets over the obstacles, the children solve more challenging problems, and get positive feedback after each step. Finally the children are happy and they feel useful they helped the main character reach the goal. This interactive problem solving require reading and collaboration.

Integrating Language Literacy and Culture through Technology in Teaching English to Speakers of Other Languages TESOL

Dr. Rebecca Curinga, Assistant Professor of TESOL

Abstract:

In an optimal classroom setting, multilingual learners simultaneously develop language, literacy skills and content knowledge. Technology can be an integral part of making connections between standards-based materials and the resources necessary to meet the content and language needs of multilingual learners. In the TESOL methods class, teacher candidates work together to research, critique, and put into practice web-

based technology and mobile applications for English language and literacy development. Candidates' produce YouTube videos to demonstrate how their chosen technology can be used in the English as a New Language classroom to foster communicative competence, understanding of diverse cultures and to make connections to communities outside of their classroom. This presentation includes examples from the candidates' review of various platforms through the lens of K-12 media literacy (Baker, 2012).

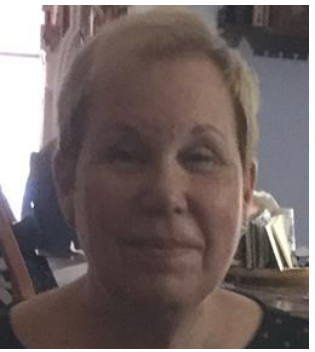
The Other Hamilton: An Episode in the History of Mathematics (Middle and High School)

Dr. Eileen Donoghue, Associate Professor of Mathematics Education, College of Staten Island

Abstract:

Today, many Americans associate the name Hamilton with the highly popular Broadway musical about one of the widely-influential 18th-century founders of the United States. In mathematical circles, the name Hamilton also is associated with the 19th-century Irish mathematician, astronomer, and physicist. William Rowan Hamilton's best known contribution to mathematics was the invention of quaternions, an extension of the complex number system. Interestingly, W. R. Hamilton might also be termed a gamer, though

decidedly of the pre-electronic era. He developed the Icosian game, which is based on travelling along the edges of a dodecahedron. The game was marketed as A Voyage Around the World. It figures in the field of graph theory as an example of a Hamiltonian cycle. In this session we will explore these two contributions and seek to make this “other Hamilton” better known.



The Best of EdTPA Task 4 Mathematics Re-engagement

Gail Rosenberg, Adjunct Faculty and EdTPA Program Coordinator

Bryan McGuckin, Computer Laboratory Technician

Graduate Students

Abstract:

Teacher candidates, who have completed and passed the Elementary edTPA will share the units they completed in Mathematics Task 4. They will share their work; materials, assessments, their students and lesson objectives.

$$\lim_{x \to 0} \left(\frac{1}{x} - \frac{1}{e^x - 1} \right) = \left(\infty - \infty \right)$$

$$x \to 0$$

$$(\ln u)' \cdot (\sin x)' = \frac{1}{u} \cdot \cos x$$

$$= \lim_{\lambda \to 0} \int_{\lambda}^{1} f(x)\,dx + \lim_{\mu \to 0} \int_{\mu}^{1} f(x)\,dx$$

$$\lim_{x \to 0} \frac{4x}{\operatorname{tg}(\pi(2-x))} = \left(\frac{0}{0} \right)$$

$$x^2 + b \sum x = \sum x^2 y \quad a$$

The Myth of the Golden Ratio in Real-Life Context

Dr. Judit Kerekes,
Associate Professor of Mathematics Education,
College of Staten Island

Abstract:

There is no place for ugly mathematics. To open our students' eyes for the beauty of the mathematics is a pleasure. More than two thousand years ago the ancient mathematicians spent plenty of time to see the beauty of mathematics. They discovered the Golden Ratio. They named it: phi. Used the Greek letter: $\phi=(1+\sqrt{5})/2$.

Pythagoras, Euclid, Leonardo, Kepler and even contemporary scientist in almost all subject area like artists, musicians, architects, biologists, psychologists, historians and of course

mathematicians were inspired by ϕ, and studied it more than any other number during the history.

Come to our section to understand: is there any relation between the Golden Ratio and the Egyptian Pyramid? What about the Fibonacci numbers? Can we see any patterns in nature? If you stand in front of Nefertiti's face, or if you are at the Acropolis of Athens, can you see the beauty and perfectness? Have you ever thought about the mathematics behind them? Come and expose it together. If you study the paintings, sculptures, buildings even music can we uncover the golden ratio? Participants will leave with classroom-ready materials, which they can modify based on their learners interests and needs.

Montessori Method in Mathematics One Hundred Years Ago and Today.

Hoda Ezzat, Teacher, Former Montessori Program Leader, Egypt

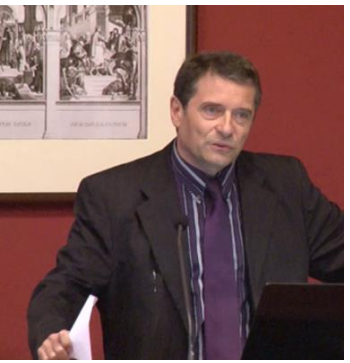
Abstract:

The Montessori Method is a methodical way of teaching. Children acquire abstract concepts before the age of 6 through playing with concrete material designed specifically for this objective. Unlike general belief that children cannot concentrate more than few minutes, children raised by the Montessori philosophy are quite capable of working/ playing independently for 1 to 3 hours continuously.

The Montessori material designed for Mathematics allow children to add, subtract, multiply and divide numbers

up to 9,999 thousand by single digit divisors. Children accomplish this using manipulatives at the beginning, then numerals hence connecting concrete to abstract thinking at a very young age.

In my presentation for the Math Connection Conference I intend to perform a division operation using abstract and concrete material to demonstrate the importance and the possibility of connecting both senses with mind at a very young age.



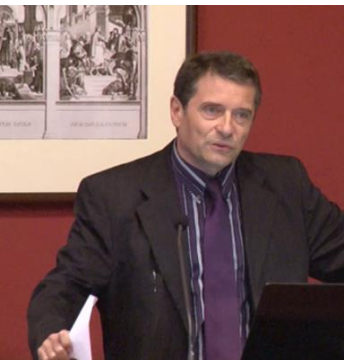
Interactive Activities in Probability for Teachers.

Dr. Ödön Vancsó,
Hungarian Academy of Science, Eötvös Loránd University, Budapest, Complex Mathematics Education Research Group Leader

Dr. Judit Kerekes,
Associate Professor of Mathematics Education, College of Staten Island

Abstract:

We'll be posing surprising, paradox phenomena with random connections, then discussing them one by one in the form of a dialogue between the students and the leaders of the workshop. Towards the end of our discussion we'll talk about the advantages and challenges of using paradoxes. The audience will receive a small collection of paradoxes, but we'll be able to discuss only a few due to time constrains. However, these few will serve as examples in order to process the rest of them.



Closing Remarks:

How Could Paradoxes be used in Teaching Statistics and Probability from grades 1 to 12

Dr. Ödön Vancsó, Hungarian Academy of Science, Eötvös Loránd University, Budapest, Complex Mathematics Education Research Group Leader

Abstract:

The idea of this presentation is based on the worldview of a very interesting book entitled Paradoxes in Probability Theory and Mathematical Statistics" from Hungarian Mathematician, G. J. Székely. In Hungary, there is a long tradition in Mathematical education using surprising facts and connections, which are very suitable to motivate

students to think. Different paradoxes will be introduced, which develop the students' probability thinking and span from the early childhood to higher education. The first such problem had been posed by T. Varga in the late 60's in elementary schools, and following this way with many other problems will be discussed showing always the goals of these paradoxes and the expected educational results, too.

Staff:

Ms. Mary Ann Durante,
Ms. Marge Nichols,
Mr. Bryan McGuckin,
Ms. Ann Marie Tafone

Dr. Eleonóra Stettner,
Chairperson of Mathematics and Informatics Department, Kaposvár University, Hungary

Bio: I have a Master's degree in Mathematics, Physics and Informatics. I got my PhD degree in Geometry at the Budapest University of Technology and Economics. I worked at a secondary grammar school for 25 years, where I taught Mathematics, Physics and Informatics for children between 10-18 years.

I have been working at Kaposvár University since 2003. I teach Mathematics in BSc, MSc and PhD courses. I am the Head of Department of Mathematics and Informatics.

I have publications on the methodology of teaching

Mathematics, the application of computer programs in teaching Mathematics and the connection of Mathematics and Arts.

I work as a research coordinator in the International Experience Workshop.

I held GeoGebra training for teachers, and I organized GeoGebra competition for primary and secondary school pupils. I participate in the grant “MTA-ELTE Complex Mathematics Education Research Group”.

Dr. Zsuzsa Márka, Research Scientist, Columbia University, USA

Bio: Zsuzsa Márka is an experimental physicist at Columbia University with major interest in instrument development for frontier scientific endeavors. Among others, she works on the LIGO (Laser Interferometer Gravitational-wave Observatory) project, the experiment that has announced the first observation of gravitational-waves from a pair of merging black holes. Her main contribution is leading the manufacturing and testing of a key subsystem, the timing system, for the LIGO detectors, and she also leads the timing diagnostics studies for the collaboration. Beyond

instrumentation, she also works with members of the Columbia Experimental Gravity group on various aspects of gravitational-wave astrophysics, including analysis of gravitational-wave data in conjunction with electromagnetic and neutrino messengers.

Dr. Judit Kerekes,
Associate Professor of Mathematics Education, College of Staten Island

Bio: *Educational philosophy*

Professor Kerekes' educational philosophy is based on a perspective that education is one of the few fields which can promote a positive change for the future. Professor Kerekes visits classrooms frequently, and she continues to collaborate with pre- and in-service students. Together they discuss their classroom needs, developing new strategies and considering how to address each child's learning needs. The power of professional peer learning and collaboration are indeed powerful paradigms which characterize her educational philosophy and teaching style.

Teaching

To serve the changing needs of the educational field, Professors Kerekes developed a new Mathematics Concentration program.

Professor Kerekes is grateful for the opportunity to teach - from introductory to advanced math education, and from interdisciplinary to graduate research students to share her passion with them. She constructs and continues a professional relationship with previous and current students.

Service

Professor Kerekes is the founder and the director of the Mathematics Connection Conference. She is also a coordinator of the LEAP to Teachers Paraprofessional Program.

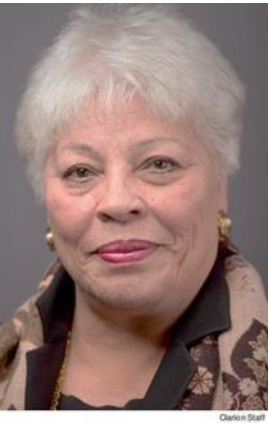
Dr. Nelly Tournaki, Chair of Educational Studies, Panel Discussion Leader.

Bio: Dr. Tournaki has taught at the college level for over 20 years. She is dedicated to inclusive education. To that effect, she opened and directed one of the first inclusive preschool in Athens, Greece. She currently sits in the Board of Directors of the Lavelle Preparatory Charter School, the first Charter school designed to teach students with special needs in inclusive classrooms.

Her research has two areas of focus. The first area is mathematics. More specifically, she evaluates strategies and tools (e.g., manipulatives, technology) to improve mathematics achievement for students with and without disabilities. The second area is teacher efficacy and effectiveness. In

this area she has examined differences in efficacy between special and general education teachers; the effects of different approaches to graduate level teacher preparation programs on teacher efficacy and effectiveness; the effects of professional development on teacher effectiveness. Her research has been consistently supported by grants from PSC-CUNY.

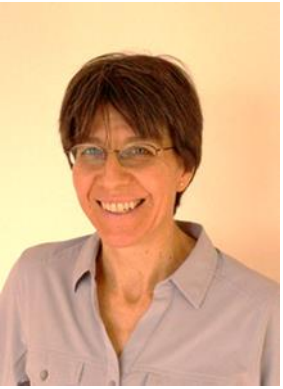
Given her strong background in psychometrics she is the internal evaluator for STEAM an NSF-STEP grant at the College of Staten Island.



Iris DeLutro, CUNY-Wide LEAP to Teacher Program Manager, Murphy Institute.

Bio: Ms. Iris DeLutro earned her Bachelor's in Labor Studies and Masters in Urban Affairs with a concentration in Public Policy from Queens College, CUNY. She works for the Murphy Institute Center for Worker Education at Queens College from 1984 to the present. Currently is the CUNY-wide Program Manager for the LEAP to Teacher Program (LTT) at Queens College, Lehman College, Brooklyn College and the College of Staten Island. She created and developed the LTT program in collaboration with the DOE, the UFT, and CUNY's for collaborating senior colleges, for paraprofessionals interested in making the transition from Para-Educators to teacher or any other field of study. She is Vice President of the Professional

Staff Congress-CUNY (PSC-CUNY), the union representing faculty and staff of the City University of New York, a New York State United Teachers Board member (NYSUT), and delegate for the American Federation of Teachers (AFT) and the American Association of University Professors (AAUP) since 2003. She's a tireless advocate for workplace bullying legislation and has raised awareness of this issue at the State and National Affiliates.

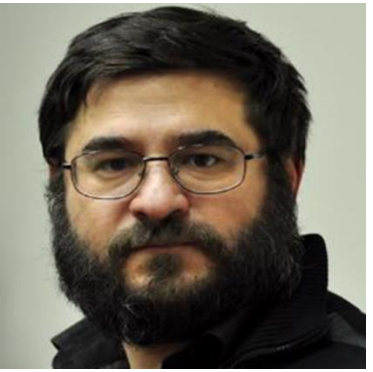


Dr. Tünde Jakab, LEAP to Teacher Program Site Coordinator

Bio: Dr. Jakab earned her Ph.D. in Mathematics at the University of Missouri-Columbia, her research focuses on Partial Differential Equations. One of her main study areas was the heat equation in Lipschitz cylinders ("Parabolic initial boundary value problems in nonsmooth cylinders with data in anisotropic Besov spaces", with M. Mitrea, Math. Res. Lett. 13 (2006), no. 5-6, 825–831). She has given a number of presentations at various conferences and universities, including the AIMS' Fifth International Conference on Dynamical Systems and Differential Equations (invited), the ones organized by the American Mathematical Society, the Association for Women in Mathematics, Carnegie Mellon University and Florida Institute

of Technology. She has been teaching an array of courses from Precalculus to Ordinary Differential Equations (University of Virginia), earning a Mathematics Distinguished Teaching Award.

More recently she started working with paraprofessionals, as part of the Leap to Teacher Program. Her goal is to give extra support and advice to paraprofessionals in order for them to achieve their educational and career goals. She feels very fortunate to be able to offer this type of assistance, which includes math tutoring for various courses and teacher certification exams.



Dr. Mikhail Epshteyn,
Associate Professor of
STEM Edu. CSI

Bio: Mikhail Epshteyn was born in Leningrad, USSR, at November, 21 1965. He studied at the at Leningrad State Pedagogical Institute, Leningrad, USSR, 1983 – 1990, M.S., Teaching Mathematics and Computer Science, 1990. Dr. Epshteyn defended his thesis at 1998, Russian State Pedagogical University, St. Petersburg, Russia (Ph.D. in Education, Educational Studies).

His teaching experience includes:

- College of Staten Island, NY, USA, 09/2016 – present, Associate Professor

- St. Petersburg State University, Russia, 09/2009 – 09/2016, Associate Professor
- Educational Center UCHATIE, Russia, 10/1993 – 08/2016, Instructor of educational programs

His management experience includes:

- “School League”, CEO, 2012-2015, St. Petersburg, Russia (a non-profit educational organization that develops innovative programs in science education)
- Educational Center “Uchastie”, Founder, CEO, 1991–2016, St. Petersburg, Russia (private school, a non-profit educational organization for teacher training and educational projects)

Dr. Irina Lyublinskaya, Professor of STEM Education, CSI

Bio: She is a recipient of various awards for teaching excellence, including RadioShack/Tandy Prize for Teaching Excellence in Mathematics, Science, and Computer Science, NSTA Distinguished Science Teaching Award and citation, Education's Unsung Heroes Award for innovation in the classroom, and NSTA Vernier Technology Award. In 2011 she has been inducted to NYS Mathematics Educators Hall of Fame.

Dr. Lyublinskaya's professional interests include curriculum development and research in the area of integrating technology into mathematics and science education, pre-service and in-service professional development of mathematics and science teachers, and Technological Pedagogical and Content Knowledge (TPACK) of pre-service and in-

service teachers. She is a recipient of Thompson TPACK award for best paper at Society for Information Technology & Teacher Education International Conference. Dr. Lyublinskaya is an author of 15 books about teaching of mathematics and science, co-author of 4 chapters in books, and has published substantially in internationally recognized academic journals.

Dr. Lyublinskaya is an active member of several national and international professional organizations, such as American Education Research Association, National Council of Teachers of Mathematics, Association of Mathematics Teacher Educators, Mathematical Association of America, Society for Information Technology and Teacher Education, International Society for Technology in Education, and National Science Teachers Association. Dr. Lyublinskaya is a doctoral faculty at the CUNY Graduate Center, Urban Education.

Dr. Rebecca Curinga,
Assistant Professor of
TESOL

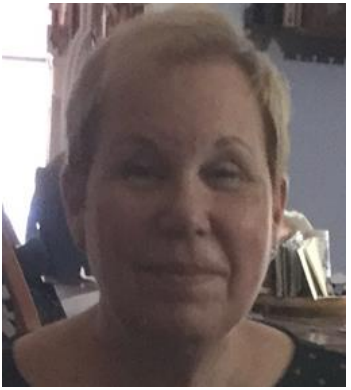
Bio: Rebecca Curinga received her Ph.D. in Linguistics from the Graduate Center of the City University of New York. Her research focused on the development of English literacy skills in high school emergent bilinguals. In particular, her research suggests that an awareness of morphological structures in the home language can contribute to the development of reading vocabulary and second language reading comprehension. She has worked on collaborative research projects with both the NYC Department of Education and NYS Education Department to implement programs that benefit high school emergent bilinguals and SIFE

with low literacy skills in their home languages. She is especially interested in researching and emphasizing the role of the home language in second language acquisition and literacy development.

Dr. Margaret E. Bérci,
Dept. Chair of Curriculum and Instruction

Bio: Margaret E. Bérci is associate professor of education at the College of Staten Island, CUNY and is the founding chairperson of the Department of Curriculum and Instruction. Prior to coming to New York, she gained experience with different levels of education in Alberta, the Canadian province that has been a leader in Social Studies education reform. Dr. Bérci's research pursues the philosophical foundations of self-knowledge. This passion translates into eclectic projects in the field of teacher education that focus on teacher self-development, teachers' ways of

knowing, place-based education, critical pedagogy and problem-based learning. All of these interests, fueled by the work of British philosopher, R. G. Collingwood, find a home in the applied world of Social Studies where she locates diverse and integrated methodologies for educating the Social Studies teacher to become a guide for the development of pre-K-12 students' democratic decision-making skills.



Gail Rosenberg, Adjunct Faculty and EdTPA Program Coordinator

Bio: Gail Rosenberg has been an educator for 50 years. She taught all grades pre K to high school for 30 years, then administrator of a Middle school for 10 years. After her retirement she taught the NYC Teaching Fellows and, for the last 11, has been teaching graduate and undergraduate methods classes, supervising student teachers, and is the edTPA Coordinator at the College of Staten Island's School of Education.

$$(x+c)^2+y^2=4a-4$$

$$\lim_{x\to 0}\left(\frac{1}{x}-\frac{1}{e^x-1}\right)=$$

$$=(\ln u)'(\sin x)'=\frac{1}{u}$$

$$\int dx=\lim \int f(x)\,dx+\lim$$

$$\frac{4x}{\quad}=\int$$