

Mathematics Teacher Professional Development Workshop

January 24, 2026

Offered by the Cornell University Department of Mathematics as part of MATH 4980/5080, together with the NYS Master Teacher Program and the Teacher Center of Central Westchester



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9:00 – 9:10 am Welcome & Overview

9:10 – 10:40 am Developing a Mathematical Modeling Mindset (Primarily 6–12, but relevant for K–16)

We will explore what a mathematical modeling mindset entails, how to develop it, and connect it with NCTM's 2024 release of *High School Mathematics Reimagined, Revitalized, and Relevant*, career readiness, student motivation, authentic problem solving, and AI. We will engage in some mathematical modeling activities, see how to open up less valuable mathematical tasks, and consider some related implications of AI.

Paul Kehle, a former high school math teacher, is professor of educational studies at Hobart and William Smith (HWS) Colleges and earned his doctorate in mathematics education at Indiana University. His interests span mathematics, cognition, teacher education, curriculum, and computer science. He conducts collaborative research with undergraduate students and with high school teachers and their students, exploring the frontiers of computational discrete mathematics. He is Director of Education at COMAP (Consortium for Mathematics and its Applications) where he co-led several NSF-funded curriculum development projects.



10:45 am – noon Effectively Implementing AI Tools in Mathematics Classrooms (Gr. 6–12)

Using AI benefits both mathematics instruction and student learning. A variety of AI tools will be demonstrated, with a focus on strategies that support teachers, strengthen instruction, and ensure student success.

Participants will gain ready to use ideas they can implement immediately in their own mathematics classrooms.

Mark Marino, Lecturer in the Department of Mathematics at SUNY Buffalo, has taught a wide range of online, hybrid, and seated mathematics courses for over two decades. He is the recipient of seven teaching awards, and has given over 100 professional presentations at international, national and state conferences about mathematics, mathematics education, computer literacy, and online teaching & learning. He currently serves as the college-level representative to AMTNYS. During the COVID-19 pandemic, Mark developed and delivered curriculum to thousands of K–12 students across the country. Prior to teaching at the college level, Mark worked at Pearson Education and taught at the high school and middle school levels.



12:00 – 12:30 pm Break

12:30 – 2:25 pm Integrating AI literacy into Standards-Based Mathematics Curriculum (Gr. 2–12)

This session is designed to empower teachers with the tools and knowledge to integrate AI literacy into their teaching practices. We will focus on integrating AI literacy into the standards-based curriculum, exploring the “Five Big Ideas in AI,” and fostering critical thinking about the technology's impact. Participants will collaborate to review lesson ideas across different grade levels and discuss practical applications in their classrooms.

Irina Lyublinskaya, professor at Teachers College, Columbia University, earned her Ph.D. in Theoretical and Mathematical Physics and an M.S. in Physics (minor in Mathematics), both at Leningrad State University (now St. Petersburg State University). Her scholarly interests include STEM education, mathematics education, science education, teacher education, educational technology, international education, research methodology, and curriculum development. She is a frequent speaker at local, state, national, and international meetings.



2:25 – 2:30 pm Closing

Modality: Virtual (Zoom) **Cost & Credit:** free; participants may earn CTLE or NYS Master Teacher credit

Registration: <https://ecornell.cornell.edu/portal/cornell-math-workshop/>

Registration Deadline: noon on Thursday, 1-22-26

After registering, you will receive a separate e-mail from eCornell that will include a link to the Canvas workshop site, where you will see detailed logistical information, including the Zoom link.