

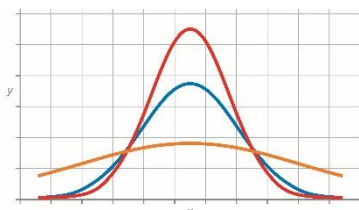


MASSACHUSETTS SCHOOL
ADMINISTRATORS' ASSOCIATION



**An MSAA Professional Development Workshop for: Secondary Teachers of Mathematics
Curriculum Leaders, Principals, and Assistant Principals**

Engage in Mathematics: Making Sense of Probability in Grades 9–12



**Featuring Delta Education Presenter:
Dr. Polina Sabinin**

Thursday, March 28, 2019
at the MSAA Office, Franklin

Sign-In: 8:00am–8:30am
Workshop: 8:30am–3:00pm

PD Hours: 6
Content Area: *Mathematics*

Fees: Member \$215 / Non-Member \$285

MSAA Contact: pd@msaa.net

The *Probability* Domain is emphasized in Grades 7–12 in the Massachusetts State Frameworks for Mathematics. In order to make sense of probability, students must make robust connections between a wide range of preliminary mathematical concepts including fractions, ratios, and proportions, to name a few. But what do we do with the students who enter high school without a robust understanding of basic probability?

This workshop will address the most common misconceptions and challenges which stand in the way of students' learning of probability with understanding. It will provide hands-on activities for students to fill the gaps and develop grade level conceptual understanding of probability.

Throughout the workshop, participants will be provided with a variety of refreshing Massachusetts State Frameworks aligned activities and strategies for use in their classrooms in developing students' Mathematical Practices and stimulating further thought.

Participants will:

- Explore the learning progression of *Probability*.
- Analyze misconceptions about probability as well as fractions, ratios, and proportions.
- Learn how to select activities which help students correct their probabilistic thinking.
- Explore a variety of aligned classroom activities to engage all high school students.
- Experience the "*Standards for Mathematical Practice*" and "*Mathematical Teaching Practices*" in action.

Dr. Polina Sabinin is an Assistant Professor of Mathematics at Bridgewater State University. She is a faculty fellow at the Office of Teaching and Learning at BSU. Through her outreach at the Center for the Advancement of STEM Education at BSU, Polina works with in-service and pre-service teachers at all grade levels. Polina is also the state director for the international Math Kangaroo Olympiad. She is currently co-authoring *LogicGym*, a teacher's manual that introduces students to logic through an engaging visual game

Register online at www.msaa.net

LEADERSHIP MATTERS



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