Mathematics Teacher Professional Development Workshop

October 26, 2024

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

AGENDA

9:00 – 9:10 am **Welcome & Overview**

9:10 am – 10:35 am **Using DESMOS to Enhance Mathematics Instruction**
Rachel Eaton & Kiana Herr (Dryden High School)

Never heard of DESMOS? Looking for electronic activities that enrich your students' learning? Already use DESMOS and interested in how to navigate the computation layer? We will accommodate all of these starting points and more! DESMOS is a FREE interactive online platform that allows teachers and students to interact with each other while discovering important mathematical concepts. Teachers can use Desmos activities, create their own, and use activities that other teachers have created. Please bring a laptop or Chromebook to begin developing your library of activities, and complete this survey (https://cornell.ca1.qualtrics.com/jfe/form/SV_eyBrWQqFZog1cLs) so all starting points can be supported!

10:45 – 11:45 am **Mysterious Prime Numbers**
Anton Mosunov (Cornell University)

Primes, which are numbers larger than one that are divisible only by 1 and itself, are fundamental objects in mathematics. They can be seen as "building blocks" of integers, as every integer larger than one is either a prime (2, 3, 5, 7, ...) or a product of primes (4=2*2, 6=2*3, 8=2*2*2, ...). In this session we will investigate interesting properties of primes, study Euclid's proof of the infinitude of primes, and learn about various conjectures concerning primes that mathematicians are currently working on.

11:45 am – 12:15 pm **Lunch**

12:15 – 1:15 pm **Magic and Mathematics**
John Maceli (Ithaca College)

This interactive talk involves using magic ideas to teach mathematics at the K–12 level, as many magic tricks are based on mathematical ideas. In this talk I will illustrate some of these connections.
(Ideas in this session will be based on: Gomez, C. & Maceli, J. (2014). Using algebraic expressions to reveal the math behind the puzzles. *New York State Mathematics Teachers' Journal*, *64*(2) 93–98.)

1:25 – 2:25 pm **Mathematics in our Lives**
Lee Kaltman (Ithaca Toys)

In life we intuitively use math concepts, not realizing we solve things algebraically, visualize things geometrically, and go about daily life using technical math skills. In this session I'll discuss ways I use mathematics in my life, and provide insights about sharing my passion for math through toymaking!

2:25 – 2:30 pm **Closing**

Modality: Hybrid (physically at 406 Malott Hall, Cornell University; and virtually through Zoom)

Registration: https://cornell.ca1.qualtrics.com/jfe/form/SV_0Ia9XwU51PiOjWK

Registration Deadline: 6 pm Monday 10/21 (if attending in person); 6 pm Thursday 10/24 (if attending virtually).

After registering, you will receive a separate e-mail from the eCornell Help Desk (ec_helpdesk@cornell.edu). This will include a link to the Canvas workshop site, where you will see detailed logistical information about the workshop, including the Zoom link.

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