

Points & Angles

Newsletter of the Metropolitan Mathematics Club of Chicago
Volume L No. 2 Oct. 2020

The Lonely Reality of an Academic Dreamer

November Speaker Pamela Harris



Date/Time: Friday,
November 6, at 7:00 p.m.

Location: Zoom online
platform

Registration: Register
online at mmcchicago.org

Cost: No charge;
donations welcome via
Zelle at
zelle4mmc@gmail.com

After immigrating to the United States from Mexico at the age of 12, Dr. Pamela E. Harris completed her high school education in Milwaukee, Wisconsin. In this talk, Dr. Harris tells us her life story, taking us through the fears of being an undocumented first-generation college student and the challenges she overcame as a woman of color with a passion for STEM. Her talk will focus on how she found support networks and mentors and the development of her identity as a scientist. She will also share how communities can help support underrepresented minorities and undocumented students in achieving their full potential as they pursue their academic careers.

Dr. Harris is currently a professor in the Department of Mathematics at Williams College in Massachusetts, as well as co-founder of LATHISMS, an organization dedicated to the representation, promotion, and celebration of the work and achievements made by Latinx and Hispanic mathematicians. Despite her modest beginnings prior to noteworthy accomplishments in academia, research, and ambassadorship, Dr. Harris is by no means an “underdog.” She actually resents that label (and rightfully so).

No educator should want to miss this talk, as Dr. Harris will bring us to the crossroads of equity, agency, and scholarship, helping us better understand how to facilitate the academic growth and accomplishments of our students that are enduring significant challenges and obstacles.

Distance Learning with Desmos

By Danielle Grenader

In an unprecedented year for educators, Scott Miller delivered a timely talk on one of our favorite online resources, Desmos! This talk was exactly what many of us needed as we continue to navigate the uncharted waters of remote learning. Scott shared a number of ideas that teachers could turn around and use in their classrooms right away!

In his talk, “Distance Learning with Desmos,” Scott gave participants the experience of using Desmos activities from both the perspective of a student and the perspective of a teacher. In true remote learning fashion, Scott had participants log into his activity from home as he projected the “Teacher Dashboard” on his screen. The activity opened with three “starter screens” from the Desmos collection that allow teachers to gather information on things like how students are feeling, their interests, and their confidence level with what they are learning. Scott suggested that since many of us are unable to interact with our students face-to-face, the starter screens targeted toward social-emotional learning might be helpful for connecting with our students.

After giving participants some time to experience the lesson as a student, Scott brought our attention to the many capabilities that Desmos offers on the teacher side. First, Scott showed us the Teacher Dashboard in “Summary” view, where teachers can see student progress at a glance, and do things like pace or pause students. He also shared one particularly interesting feature where teachers have the ability to make students anonymous. Scott explained that this “Anonymize” feature replaces each student’s name with the name of a famous mathematician from somewhere in the world, past or present, which might be useful when publicly displaying student work.

After showing us the “Summary” view, Scott then moved on to show us the “Teacher” view, where teachers can see every student’s response to a selected question. One interesting feature on this page is the ability to overlay certain types of responses, such as drawings, on top of one another. Additionally, a very useful feature that this page offers is the snapshot tool, which allows teachers to clip student responses that they might want to highlight for further discussion. These snapshots are compiled onto the “Snapshots” page, where teachers have further options to select, sequence, and organize their snapshots to help facilitate discussion.

After walking us through the multitude of features that Desmos offers to help teachers facilitate synchronous instruction, Scott also mentioned that Desmos can be a great tool for asynchronous instruction as well. Specifically, he pointed out that some screens can be designed to give immediate feedback to students, allowing them to learn independently. For example, when learning to write linear equations, students could work on screens from the “Land the Plane” collection, where they can write equations, see how the plane flies based on their equation, and continue making adjustments until their plane successfully lands on the runway.

Finally, Scott shared some of the newest updates that Desmos has made available, such as the ability to create classes, add co-teachers, and provide individual student feedback. He also showed us where to find screens and activities that Desmos has pre-created and how to copy screens from existing activities into our own custom activities. Something that many teachers might find useful is that Desmos even has a pre-made collection for whiteboards! Furthermore, he pointed out that if teachers are interested in seeing a broader range of pre-made activities beyond what Desmos has created, they can do a Google search and explore activities that other educators have put together.

Surely, this year of non-traditional learning will continue to pose many interesting twists and turns, but thanks to Scott Miller and the Desmos Team, the math education community will be all the more equipped to rise to the challenge!

Teaching Mathematics as Compassion, Connection, and Collective Resistance: Online Classrooms with Justice at the Center

By Janice Krouse

MMC hosted its second virtual “dinner” talk on September 25, titled "Teaching Mathematics as Compassion, Connection and Collective Resistance: Online Classrooms with Justice at the Center." Mary Raygoza, PhD, Assistant Professor of Teacher Education at St. Mary’s College of California was joined by Kelsey Macias, MA, a secondary educator at Dublin High School (CA) and Adjunct Professor at St. Mary’s College of California. Together, they shared their thoughts on how to build and sustain a mathematical community with students in our virtual classes.

Recognizing that we are all enduring a “Mindful Moment for Mathematics,” our speakers began with a moment of meditation to acknowledge our shared humanity. With the world’s unprecedented challenges, they urged teachers to be self-compassionate, persistent, and strong and to engage in work with urgency and patience in self-sustaining ways. This served as a model and challenge for all of us to incorporate mindful math moments with our students in an effort to create safe and productive virtual communities of students.

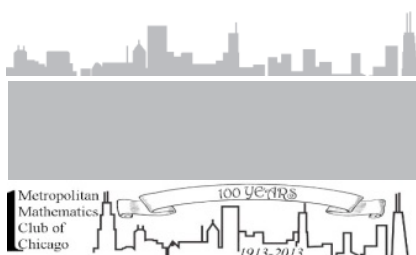
Toward this end, Dr. Raygoza and Ms. Macias promoted the creation or co-creation of classroom norms and emphasized the value of making time for students to reflect on them and in creating their digital representations. Such norms might include the commitment to flexibility, encouraging mathematical debate while maintaining personal humanity and expecting confusion and uncertainty while doing mathematics.

In further support of fostering community, we heard many suggestions for icebreakers and beyond. Naming three variables about oneself, describing an important number in your life and why, and writing math autobiographies were among the suggestions for consideration. Ways to take “temperature checks” such as high and low, rose and thorn, or finding a hashtag or emoji to represent the week were just a few of the intriguing suggestions for building meaningful connections between teachers and students. Ultimately, we must strive to know what support each student needs and whether they have what they need to get it.

Our speakers also included valuable resources to further the conversation from Shawn Ginwright, Dan Siegl and Kari Kokka. The focus on humanizing essential questions, assessments and activities in mathematics were illuminated by Dr. Raygoza as she briefly presented various tech tools that can be used to humanize mathematics while engaging students in the virtual classroom. New features of Desmos that mathematize emotions or a Bitmoji Google Classroom slide are noteworthy ways to reach some students. Flipgrid, Formative and Edulastic are helping teachers to assess students, some in real time. Interactive whiteboards and Edpuzzle can also bring learning to life for students. Returning to the theme of self-compassion, Dr. Raygoza and Ms. Macias reminded us to do the best we can, share ideas, and not feel compelled to try every tech tool in one year!

Finally, Dr. Raygoza and Ms. Macias touched on incorporating the social and political world in math class. They stressed the value of a curriculum guided by essential questions centered on why math matters. Ms. Macias acknowledged the divide between social-emotional learning and social justice mathematics and, as a very informative hour was winding down, presented a wealth of resources for teachers to navigate cultural structures, employ culturally sensitive pedagogies and consider social justice curricular ideas.

A fulfilling talk ended with a reminder to take care of ourselves and each other! We are indeed in unprecedented times, with forces to resist, embrace and move our practice forward.



Points from the Interior

by Serg Cvetkovic

And we're off! The school year is in full swing, with most of us teaching remotely, with nothing more than a computer and a handful of apps and extensions. Honestly, it feels like an episode of the *Twilight Zone*. It is lonely. It is boring. It is frustrating and sad, knowing that many of our students need so much more from us, but we cannot be there to provide it for them. Heck, on many days it feels like I am teaching into a void, with nothing but silent avatars looking back at me, as I sit and listen to myself talk about the law of cosines or geometric sequences. That may have worked for Isaac Newton, but it has been beyond aggravating for me. However, I know that my students do not do this to spite me. Many of them are merely preserving their dignity. There have been several instances where my students have turned on their cameras and microphones, revealing the noise and chaos that occurs in their homes, as they juggle caring for younger siblings and completing household chores, while trying to absorb algebra and geometry. Believe me, they want to be back in school more than we do, as school provides them with peace and stability, at the very least.

There is a happy ending to this tale, however. Like my immigrant grandfather who grew up during WWII with nothing more than a fourth-grade education told me, "Human beings are a strong species. We have survived all sorts of horrific things over the last 300,000 years. We need to give ourselves more credit. Our skin has grown too thick and our blood flows too strong for us to keel over and give up." Like all things (with the exception being the Rolling Stones), COVID – 19 will come to an end. We do not know when exactly, but it will, and when it does, we will be excited to wake up early each morning and go teach calculus, statistics, and long division. Our students will be happy to be back in school and learning. School will be a fun and exciting place for all! No amusement park in the world will be able to hold a candle to the joy and wonder of school! Until that magical day happens, MMC will be here to continue to provide brilliant and cutting-edge professional development (we already had two virtual talks that had a terrific turnout and positive feedback, and if you continue turning the pages, you will see some more talks we have on deck), suited to help you navigate remote or hybrid instruction with minimal stress and frustration. Hang in there, comrades! Everything will be okay. We don't know when, but it will eventually, and in the meantime, MMC's got you covered with talks and learning opportunities that will be well worth your time! Live long and prosper.

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Join us on October 23 for Assessments in Remote or Hybrid Learning!

Assessments in remote or hybrid learning is one of the hot topics among teachers. How do we handle this in our crazy new world in a way that is authentic, fair, and meaningful? MMC is going to try to help. We have compiled a great panel to address assessment in this new environment. Panelists include Michael Buescher (Hathaway Brown School), Beth Bushek (Glenbrook South High School), and Marti Shirley (Illinois Math & Science Academy). Moderators will be MMC Board Member Mary Wiltjer and MMC President-Elect Aimee Hart.

MMC is continuing to offer free, quality, convenient professional development for math educators during this unprecedented time. This webinar will feature local educators discussing assessment of students in hybrid and remote learning. Panelists will discuss various tools that are available for assessment online, as well as ways to rethink questions and assessment in this remote environment. Please join us on Friday, October 23, at 7:00 p.m. to learn from some wonderful colleagues both in and out of the Chicagoland area. You can register at mmcchicago.org. If you'd like to see the webinar but cannot make the time, please register and you will receive a video link the next day.

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Upcoming Events

Fri., Oct. 23	Panel of Speakers	Assessments in Remote or Hybrid Learning (via Zoom)
Fri., Nov. 6	Pamela Harris	The Lonely Reality of an Academic Dreamer (via Zoom)
Fri., Dec. 4	Marian Dingle	Opening the Mathematical Gates: Moving Toward Inclusivity and Belonging (via Zoom)
Fri., Jan. 22	Zalman Usiskin	Some Great Middle and High School Mathematics Lessons Few People Teach (subject to change)
Fri., Mar. 5	Tom Reardon	Climate Change: Creatively Use Good Mathematics to Model the Reality (subject to change)
Fri., May 14	Jackie Palmquist	5 Surprising Benefits of Number Talks in Secondary Math Classrooms (subject to change)

Send upcoming event items to sburnett_308@yahoo.com no later than the date of the MMC dinner meeting preceding the issue in which the item should appear. All items are subject to editing.

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