

**Mathematical Association of America
Fall 2022 Meeting of the
New Jersey Section**



**Atlantic Cape Community College
Mays Landing Campus**

Saturday, October 22, 2022

Abstracts and Biographies of Speakers

The Joy of SET

Gary Gordan and Liz McMahon
Lafayette College

The card game SET is played with a special deck of 81 cards. There is quite a lot of mathematics that can be explored using the game; understanding that mathematics enhances our appreciation for the game, and the game enhances our appreciation for the mathematics! We'll look at questions in combinatorics, probability, linear algebra, and especially geometry. The deck is an excellent model for the finite affine geometry $AG(4,3)$ and provides an entry to surprisingly beautiful structure theorems for that geometry. There is also a Daily Puzzle, and there is interesting mathematics related to it. If you'd like some practice before the talk, go to www.setgame.com for the rules and the Daily Puzzle.



Gary Gordan received his B.A. from the University of Florida in 1977 and his Ph.D. from the University of North Carolina in 1983. His research interests are in combinatorics. He ran Lafayette College's REU program for a decade and has thoroughly enjoyed doing research with enthusiastic undergraduates. His favorite research partner is Liz, though. He loves baseball, enjoys climbing things, and occasionally plays the piano.

Liz McMahon received her A.B. from Mount Holyoke College in 1975 and her Ph.D. from the University of North Carolina in 1982. Her research interests are in

algebra, combinatorics and finite geometry. She also ran Lafayette College's REU program and enjoys sharing math with anyone who will listen. Her favorite research partner is Gary, not surprisingly, and she has coauthored a book, the *Joy of SET*, with Gary and their two daughters. She loves reading, cycling, hiking, and traveling.

Humanizing Assessments

Jennifer Quinn

University of Washington Tacoma

MAA President

Why do you grade? To objectively evaluate student knowledge? To motivate student effort? To provide feedback for improvement? Did your grading reality change because of COVID-19? The lessons learned through emergency remote teaching during a global pandemic *must* be used to inspire more humane and purposeful approaches to mathematics assessment.

Jennifer Quinn is President of the MAA and professor of mathematics at the University of Washington Tacoma. She earned her BA, MS, and PhD from Williams College, the University of Illinois at Chicago, and the University of Wisconsin, respectively. In addition to her current role with the MAA, Jenny has held many positions of national leadership in mathematics including Executive Director of the Association for Women in Mathematics, co-editor of MAA's *Math Horizons*, and chair of the MAA Council on Publications. She received a Haimo Award for Distinguished College or University Teaching and a Beckenbach Book award for *Proofs That Really Count: The Art of Combinatorial Proof*, co-authored with Arthur Benjamin. Committed to making mathematics accessible, appreciated, and humane especially during the global pandemic, Jenny and the #TacomaMath workgroup chalked puzzles outdoors and produced [Math Around Town](#) Videos to create a culture of love for math in the community. In



addition, Jenny began the blog [Math in the Time of Corona](#) where she chronicles her experiences on emergency remote teaching of mathematics, maintaining humanity, and building community in isolation.

Panel on the New Normal: Math in a Post-Pandemic World

We have all faced challenges and successes in the dual transition to remote and then back to in person. Join in a discussion with our colleagues to see how our colleagues, departments, institutions, and students from across NJ dealt with the changes and are transitioning into a new normal. We invite audience members to share in the discussion with their own experiences.

Panelists:

Aihua Li, Montclair State University

Dawn Nelson, Saint Peter's University

Jennifer Quinn, MAA President, University of Washington Tacoma

Jonathan Weisbrod, Rowan College at Burlington County

Moderator:

Amanda Beecher, Ramapo College of New Jersey

Workshop: The Joy of SET: Further Exploration

Gary Gordan and Liz McMahon

Lafayette College

This workshop is intended for attendees to explore ideas from the talk, particularly from geometry. We will include the Daily Puzzle.

Contributed Paper Sessions

Organizer: Kathy Turrisi, Centenary University

General Contributed Papers, Session 1: Room G205

Moderator: Elizabeth Uptegrove, Felician University

1:30–1:50: Developing Innovative Assessments for Upper-Level Math Classes

Grace Cook, Colette Barca, and Phil Benjamin, Bloomfield College

1:55–2:15: Examining Euclid’s Classical Proof on the Infinitude of Primes with Some Associated Conjectures and Technology

Jay L. Schiffman, Retired (Rowan University)

2:20–2:40: Some Activities that Support Teaching Arithmetic to College Students

Elizabeth Uptegrove, Felician University

2:45–3:05: Image Processing in College Mathematics

Yevgeniy Galperin, East Stroudsburg University of PA

General Contributed Papers, Session 2: Room G206

Moderator: Aihua Li, Montclair State University

1:30–1:50: Design of Textile Strips with Geometry Shapes and Mathematical Analysis

Aihua Li, Montclair State University and Somia Benali, JFK High School, Patterson NJ

1:55–2:15: Inequalities for the n -Crossing Number of a Knot

Nicholas Hagedorn, student Princeton High School

2:20–2:40: Laplacian Eigenvalues of Special Cases of L-Graphs

Michael Catli, student Seton Hall University

**2:45–3:05: Language Acquisition and its Effects on English Language Learners
Developing Math Skills**

Alexandra Teutle, student Bloomfield College

Abstracts are included in the online program available at www.maa.org/newjersey

continued on page 8

**Mathematical Association of America
New Jersey Section, Fall 2022 Meeting Program**
Most events take place in Walter Edge Hall,
concurrent sessions (1:30-3:00) take place on the second floor of G building.

8:30 – 9:30	Registration. Walter Edge Hall Theater Lobby Coffee. Cafeteria (C106)
9:00 – 1:30	Book Exhibits. Walter Edge Hall Theater Lobby
9:30 – 9:40	Welcome by Dr. Josette Katz, Senior Vice President of Academic Affairs, Atlantic Cape Community College. Walter Edge Hall Theater
9:40 – 10:30	The Joy of SET, Gary Gordan and Liz McMahon, Lafayette College. Presider: Grace Cook, Bloomfield College. Walter Edge Hall Theater
10:30 – 10:45	MAA-NJ Business Meeting. Walter Edge Hall Theater
10:45 – 11:10	Intermission and Book Exhibits. Walter Edge Hall Theater Lobby and Cafeteria (C106)
11:10 – 12:00	Panel on the New Normal: Math in a Post-Pandemic World. Moderator: Amanda Beecher, Ramapo College of New Jersey. Walter Edge Hall Theater
12:00 – 1:30	Lunch. Cafeteria (C106) Lunch Discussion Tables. room C3 (accessible from inside Cafeteria)
1:30 – 2:45	Workshop: The Joy of SET: Further Exploration, Gary Gordan and Liz McMahon, Lafayette College. room G204
1:30 – 3:05	General Contributed Papers: Sessions 1 and 2. rooms G205 and G206
3:00 – 3:30	Intermission and Refreshments. Walter Edge Hall Theater Lobby and Cafeteria (C106) (Silent auction bidding ends at 3:30)

3:35 – 4:25	Humanizing Assessments , <i>Jennifer Quinn, University of Washington Tacoma, MAA President</i> . Presider: Ik Jae Lee, Rowan University. Walter Edge Hall Theater
4:30 – 5:00	Prizes and Awards . Door prizes and silent auction winners (must be present to win). Walter Edge Hall Theater
5:30	Dinner Honoring Speakers . Inn at Sugar Hill - Izzy's Steak and Seafood House, 5704 Somers Point Rd, Mays Landing, NJ

Code of Conduct. “The MAA is committed to, and benefits from, the full and equitable participation of a diverse community in its membership, in its activities, and in the audiences that it serves. Hence, the MAA wants to maintain a welcoming environment for all its meetings.” Please see www.maa.org/about-maa/policies-and-procedures/maa-code-of-conduct for the complete code.

A lactation room (C136), a prayer room (C132), and gender neutral bathrooms are all in Walter Edge Hall, stage left (relative to the theater).

Business Meeting

At 10:30, just before the break, MAA-NJ will have a brief business meeting.

The business meeting includes an election for MAA-NJ officers. As of printing time, the officer election slate for the Fall 2022 election is:

Chair	Jonathan Weisbrod
Treasurer	Dirck Uptegrove
Vice-Chair for Speakers	Deepak Bal
Vice-Chair for 2-Year Colleges	Tuan Le
Vice-Chair for Student Activities	Lee Collins
Vice-Chair for Fall Meetings	Sheila Tabanli
Vice-Chair for Spring Meetings	Dawn Nelson

Note that descriptions of these positions can be found in the section by-laws on the MAA-NJ web site: sections.maa.org/newjersey/

continued from page 5

Lunch Discussion Tables

Organizer: Kathy Turrisi, Centenary University

1. **Community Outreach**, led by Jennifer Quinn, MAA President, University of Washington Tacoma
2. **NJ NExT Fellows Past & Present**, led by Chung Wong, County College of Morris
3. **Classroom Best Practices**, led by Dawn Nelson, Saint Peter's University
4. **Open Forum – Outside Dining**, led by Karen Clark, The College of New Jersey

Those who pre-registered have priority at these discussion tables. We look forward to a set of lively and interesting discussions!

Dinner Honoring the Invited Speakers.

Following the meeting, the Section will honor the invited speakers at dinner at The Inn at Sugar Hill - Izzy's Steak and Seafood House, 5704 Somers Point Rd, Mays Landing, NJ. Everyone is cordially invited.

Book Sales at the Meeting

The AMS now handles MAA book sales. There will be display books at the meeting, and there will be discounted prices, but you will not be able to buy books from AMS at the meeting. You can order them by calling (800) 321-4267 or via the website bookstore.ams.org/maa-press-browse

Report on the 2022 MathFest MAA Congress Meeting

Respectfully submitted by Karen Clark, The College of New Jersey

The Congress met for an all-day meeting in Philadelphia on August 3, 2022, prior to the beginning of MathFest. The meeting began with Congress Chair Edray Goins giving a Statement of Land Acknowledgement, a reminder of the MAA Mission and Vision, and introductions.

MAA President Jenny Quinn delivered the President's Report. The MAA webinar

series created to meet a need during the pandemic will continue due to its popularity and reach. In addition, beginning this year the MAA will be accelerating its rotation schedule for Polya Lecturers and has added two new speaker programs. This will provide each section with a funded invited lecture each year. The move of headquarters and new code of conduct was also discussed.

An overview of MAA Programs was delivered. Links to featured programs are below.

- Outreach Programs: www.maa.org/node/1226565/
- Virtual Programming: www.maa.org/node/2304475/
- Distinguished Lecture Series: www.maa.org/programs/maa-distinguished-lecture-series
- Professional Development: www.maa.org/programs-and-communities/professional-development

This portion of the meeting concluded with the announcement of a collaboration with the Online Undergraduate Resource Fair for the Advancement and Alliance of Marginalized Mathematicians, to be held via Zoom on November 19 and 20.

sites.google.com/view/ourfa2m2

Budget and Impact Reports were delivered by MAA staff, and the Congress then went on to discuss potential changes to bylaws. No decisions were reached.

The afternoon included a discussion of the MAA strategic planning process, and small group meetings with MAA Council Chairs. The day concluded with a discussion of ideas for the future of MAA.

Future Meetings

MAA-NJ. The Spring 2023 MAA-NJ Section meeting will be held at Kean University on Saturday, April 1, 2023.

GSUMC. The 2023 Garden State Undergraduate Mathematics Conference will be held in conjunction with the Spring Meeting of the NJ Section at Kean University. The conference will include poster and oral presentation sessions for undergraduate students, as well as a team mathematics-problem competition. There are many opportunities for faculty to participate in co-organizing the

conference. Contact one of the co-directors Lee Collins (collinsn@rowan.edu) or Joseph Coyle (jcoyle@monmouth.edu) to volunteer. For additional details see the GSUMC web site: sections.maa.org/newjersey/GSUMC/GSUMC.htm

MathFest. The 2023 MathFest will be in Tampa Florida, August 2-5.

Call for Contributed Papers, Topics for Special Sessions, and Lunch Table Discussion Topics for the Spring 2023 MAA-NJ Meeting

We are seeking abstracts for review for the General Contributed Paper Sessions. MAA Contributed Papers may focus on any aspect of mathematics. Examples include expository mathematics, connections within mathematics or between mathematics and other disciplines, the undergraduate mathematics curriculum, diversity, equity, inclusion in mathematics, social justice in the classroom, teaching, data analysis, or mathematical pedagogy. The CPS committee seeks and encourages proposals that will contribute toward a well-balanced and scholarly program that represents the MAA's mission. Please send the title and abstract to Kathy Turrisi, Executive Board Member and Chair of the CPS Committee, at: Kathy.Turrisi@centenaryuniversity.edu.

MAA members interested in proposing a Topic for a Special Session or are interested in leading a Lunch Table Discussion should submit their proposals to Kathy Turrisi at Kathy.Turrisi@centenaryuniversity.edu.

Call for Nominations for the MAA-NJ Award for Distinguished College or University Teaching

The MAA-NJ Section Distinguished Teaching Award Selection Committee is seeking nominations for the 2023 award. Please consider nominating an inspiring, respected, or influential and deserving colleague for this prestigious award. Nomination information is posted at www.maa.org/newjersey. For additional information you may contact Elizabeth Uptegrove (Secretary, MAA-NJ) at uptegroove@felician.edu. Nominations are due by **November 21, 2022**.

Social Media Information

Check us out!

Email: maanjsocialmedia@gmail.com

Facebook: www.facebook.com/maanewjersey

Instagram: instagram.com/maanewjersey

Twitter: twitter.com/maanewjersey

MAA-NJ Committees

Awards Committee: Amanda Beecher (ex-officio), Ramapo College; Tuan Le, Camden County College; Aihua Li, Montclair State University; David Nacin, William Paterson University; Elizabeth Uptegrove, Felician University; Jonathan Weisbrod (chair), Rowan College at Burlington County.

Nominating Committee: Amanda Beecher (ex-officio), Ramapo College; Karen Clark, The College of New Jersey; Paul von Dohlen (chair), William Paterson University; Chung Wong, County College of Morris.

Teaching Award Committee: Amanda Beecher (ex-officio), Ramapo College; Susan Marshall, Monmouth University; Dirck Uptegrove; Paul von Dohlen, William Paterson University.

Contributed Paper Committee: Grace Cook, Bloomfield College; Kathy Turrisi (chair), Centenary University.

Acknowledgments. We thank the ACCC Mathematics and Engineering Department, Johnna Atkinson, Lee Collins, Heather Fischer, Dr. Kalpana Jain, Dr. Josette Katz, and Doug Mills for their kind hospitality and assistance in hosting this meeting.

We thank Princeton University Press for their generous donations for silent auction and door prizes.

MAA-NJ Section Officers

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Secretary

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Jonathan Weisbrod, Rowan College at
Burlington County

Deepak Bal, Montclair State University

Lee Collins, Atlantic Cape Community
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Joseph Coyle, Monmouth University

Tuan Le, Camden County College

Dirck Uptegrove;

Elizabeth Uptegrove, Felician University

Kathy Turrisi, Centenary University

Linda Ritchie, Centenary University

Ik Jae Lee, Rowan University

Dawn Nelson, Saint Peter's University

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