# Spring 2023 Meeting
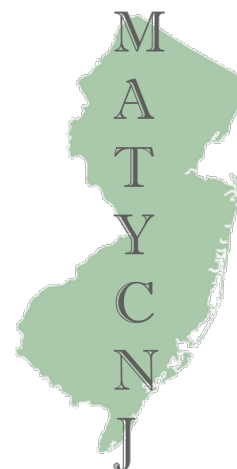
## of the New Jersey Section of
## the Mathematical Association of America
## held in conjunction with MATYCNJ (Mathematics Association of Two-Year Colleges of New Jersey)

## and
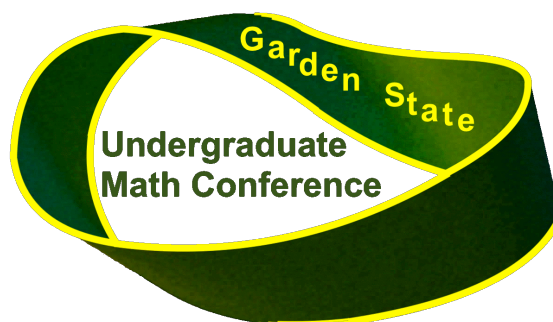
## Garden State Undergraduate Mathematics Conference

## Kean University
## Saturday, April 1, 2023

**MAA-NJ and MATYCNJ**
**Spring 2023 Meeting Program**
**Morning events take place in the Liberty Hall Academic Center (LHAC),**
**lunch and afternoon events take place in the STEM building.**

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|---|---|
| 8:30 – 9:15 | **Registration and Coffee.** LHAC 112 |
| 8:30 – 12:00 | **Book Exhibits**. LHAC 112 |
| 9:15 – 9:30 | **Welcome.** *Dr. David Birdsell, Provost and Senior Vice President for Academic Affairs, Kean University*. LHAC 114 |
| 9:30 – 10:20 | **Why does Ramanujan, "The Man Who Knew Infinity", matter?** *Ken Ono, University of Virginia*. Presider: Jonathan Weisbrod, Rowan College at Burlington County. LHAC 114 |
| 10:20 – 11:00 | • **MAA-NJ Business Meeting.** LHAC 114<br>• **MATYCNJ Business Meeting.** LHAC 203<br>• **Refreshments.** LHAC 112 |
| 11:00 – 11:50 | **Beyond the Worksheet.** *Julie Gunkelman, Oakland Community College.* Presider: Samantha Doluweera, Brookdale Community College. LHAC 114 |
| 12:00 – 1:30 | **Lunch.** STEM Atrium |
| 1:00 – 2:00 | **Student Poster Session.** STEM Atrium |
| 2:00 – 3:15 | • **Workshop: Tips for Mathematicians Pursuing National Institutes of Health Grants.** STEM Auditorium<br>• **General Contributed Papers: Sessions 1, 2, and 3.** STEM 308, 401, and 501<br>• **Student Talks.** STEM 306 and 307 |
| 3:15 – 3:45 | **Intermission and Refreshments.** STEM Lobby<br>(Silent auction bidding ends at 3:30) |
| 3:45 – 4:35 | **The Underlying Topology of Data.** *Jose Perea, Northeastern University.* Presider: Joseph Coyle, Monmouth University. STEM Auditorium |
| 4:35 – 5:00 | **Prizes and Awards.** GSUMC awards, door prizes and silent auction winners (must be present to win). STEM Auditorium |
| 5:30 | **Dinner Honoring Speakers.** The Garden Restaurant, 943 Magie Ave, Union, NJ |

# Garden State Undergraduate Math Conference
## Spring 2023 Meeting Program
### All events take place in the STEM building.

| | |
|---|---|
| 8:30 – 9:15 | **Team Registration, Student Check-in, and Breakfast.** STEM Lobby |
| 9:20 – 9:30 | **Announcements.** STEM Auditorium |
| 9:30 – 10:30 | **New Jersey Undergraduate Math Competition; Individual Part.** STEM Auditorium |
| 10:30 – 12:00 | **New Jersey Undergraduate Math Competition; Team Part.** rooms to be announced during the individual part |
| 12:00 – 1:00 | **Lunch.** STEM 3rd floor lobby and STEM 3rd floor classrooms |
| 1:00 – 2:00 | **Student Poster Session.** STEM Atrium |
| 2:00 – 3:15 | <ul><li>**Workshop: Tips for Mathematicians Pursuing National Institutes of Health Grants.** STEM Auditorium</li><li>**General Contributed Papers: Sessions 1, 2, and 3.** STEM 308, 401, and 501</li><li>**Student Talks.** STEM 306 and 307</li></ul> |
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**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 is available in LHAC 122C.

# Abstracts and Biographies of Speakers

## Why does Ramanujan, "The Man Who Knew Infinity", matter?
Ken Ono

University of Virginia

This lecture is about Srinivasa Ramanujan, "The Man Who Knew Infinity." Ramanujan was a self-trained two-time college dropout who left behind 3 notebooks filled with equations that mathematicians are still trying to figure out today. He claimed that his ideas came to him as visions from an Indian goddess. This lecture is about the many reasons why Ramanujan matters today. The answers offer commentaries on mentorship, pipeline issues in the sciences, and of course scientific ideas that matter. The speaker was an Associate Producer of the film "The Man Who Knew Infinity" (starring Dev Patel and Jeremy Irons) about Ramanujan. He will share several clips from the film along the way.

**Ken Ono** is a mathematician at the University of Virginia, where he is the STEM Advisor to the Provost, fellow of the Shannon Center for Advanced Studies, and the Marvin Rosenblum Professor of Mathematics. He is well known for his research in mathematics, specializing in algebra, combinatorics, and number theory. Ono has received many awards for his research, including a Guggenheim Fellowship, a Packard Fellowship, and a Sloan Fellowship. In a ceremony at the White House in 2000, Bill Clinton awarded Ono a Presidential Early Career Award for Science and Engineering. In 2005 he was named the National Science Foundation's Distinguished Teaching Scholar, the foundation's highest honor for excellence in teaching and research. He is a fellow of the American Mathematical Society. His professional service has included leadership roles in various professional organizations, such as vice president of the American Mathematical Society, chair of the Mathematics Section of the American Association for the Advancement of Science, member of the U.S. National Committee for Mathematics at the National Academy of Sciences, member of the advisory board of the Conference Board of the Mathematical Sciences, U.S.

delegate to the International Mathematics Union, and member of the board of trustees of the Association of Members of the Institute for Advanced Study. Outside the traditional university setting, he is the founder and director of the Spirit of Ramanujan STEM Talent Initiative, which supports emerging engineers, mathematicians, and scientists who lack traditional institutional support through financial grants and mentorship opportunities. Finally, Ono has a footprint in film and sports. He was an associate producer of the Hollywood film "The Man Who Knew Infinity," which starred Dev Patel and Jeremy Irons. He is a member of the board of the Infinity Arts Foundation, which cultivates films on STEM topics that matter. Building on his lifelong interest in Olympic sports, he is a technical consultant for elite swimmers, having advised multiple NCAA national champions and Olympic medalists. In 2022 he starred as himself in a Super Bowl commercial for Miller beer.

## Beyond the Worksheet
### Julie Gunkelman
### Oakland Community College in Michigan

Active learning has earned its place in college math classrooms across the country. Students experience a variety of strategies that encourage them to think critically, collaborate and apply what they have learned.  Several activities will be shared from College Algebra, Trigonometry and Calculus.  Please bring a laptop or tablet to fully participate in the session.

**Julie Gunkelman** is a full-time Mathematics faculty member at Oakland Community College in Farmington Hills, Michigan. She earned her Bachelor of Science degree in Mathematics at Michigan State University and her Master of Arts in Mathematics from Eastern Michigan University. Julie was awarded the MichMATYC Teaching Excellence Award in 2014 and was a finalist for the American Association of Community Colleges Faculty Innovation Award in 2018. Julie has focused on incorporating a variety of teaching

strategies and using technology in her classes throughout her career.  She is currently the Assistant Program Coordinator for AMATYC and the MichMATYC President.

## The Underlying Topology of Data
Jose Perea
Northeastern University

Topology, and particularly algebraic topology, seeks to develop computable invariants to quantify the shape of abstract spaces. This talk will be about how such invariants can be used to analyze scientific data sets, in tasks like time series analysis, semi-supervised learning and dimensionality reduction. I will use several examples to illustrate real applications of these ideas.

**Jose Perea** is an associate professor in the department of mathematics and the Khoury college of computer sciences. Prior to Northeastern, he held positions as an assistant professor of CMSE and Mathematics at Michigan State (2015 – 2021), and as a visiting assistant professor of Mathematics at Duke University (2011 – 2015). He holds a PhD in Mathematics from Stanford University (2011) and a BSc in Mathematics from Universidad del Valle, Colombia (Valedictorian, Summa cum laude, 2006). He is the inaugural 2022-2024 lecturer for the Mathematical Association of America and the National Association of Mathematics, a recipient of a 2020 NSF CAREER award, a 2020 honoree of Lathisms (Hispanic heritage month), and a 2018 honoree of Mathematically Gifted and Black (black history month).

# Workshop: Tips for Mathematicians Pursuing National Institutes of Health Grants

Diana M. Thomas, Andrew Lee, Shane Clark
United States Military Academy at West Point

The majority of mathematicians are not funded by external grants and those that are funded are typically funded through the National Science Foundation. The National Institutes of Health (NIH) provide untapped unique opportunities for mathematicians at all career stages. For example the NIH K25 mechanism provides 5 years of protected time (no teaching) so that the investigator with a mathematical sciences background can leverage and transition their skills towards the biomedical sciences. In this workshop, we will cover some of the basic NIH funding mechanisms, mailing lists that contain current NIH opportunities, along with a 1-page "WiKi" on how to prepare NIH proposals. We will also share our recent nuts to bolts experience securing a substantial sized NIH grant for an AI center in Precision Nutrition that was transformational for our Department and Institution. This workshop is set up to be interactive with many opportunities for Q&A.

**Diana M. Thomas** received her Ph.D. from the Georgia Institute of Technology in 1996. She then completed a National Research Council funded post-doctoral fellowship at the United States Military Academy and the Army Research Laboratory. In 2000, she joined the faculty of the Montclair State University where she was a professor of mathematics and the director of the Montclair State University Center for Quantitative Obesity Research till 2016. Dr. Thomas is currently a professor of mathematical sciences at the United States Military Academy at West Point.

Dr. Thomas has been an active research mathematician for over 25 years with a recent focus on nutrition and obesity related modeling. She has worked with large complex and high dimensional datasets and co-invented the remote weight loss program, SmartLoss™, which has been clinically applied world-wide to guide and improve individual patient weight loss adherence through smartphone technology. Dr. Thomas has published over 150 peer-reviewed articles and has led the development of over 10 freely accessible health calculators. She is an associate editor for the world's top ranked journal for original research in nutrition, the American Journal of Clinical Nutrition and co-edits the series "Best (but oft-

forgotten) practices", which consists of methodologic commentaries or statistical tutorials. She also serves as an editor for Nutrition and Diabetes and the European Journal of Clinical Nutrition. Dr. Thomas is currently the PI of the Artificial Intelligence, Data Engineering & Machine Learning Center for the Nutrition for Precision Health Consortium where she serves as a co-chair for the Steering Committee. She has held governance positions in the Obesity Society, the American Society of Nutrition, and the Mathematical Association of America. Dr. Thomas holds the 2012 Mathematical Association of America of NJ Distinguished Teaching Award, the 2015 Obesity Society George Bray Founder's Award, and the 2023 American Mathematical Society Mary P. Dolciani Prize for Excellence in Research.

**Andrew Lee** received his MA and PhD in Transportation from the Massachusetts Institute of Technology and has expertise in a wide variety of operations research and transportation models focusing on military applications, unmanned aerial systems, and disaster relief. At the United States Military Academy, Dr. Lee is the program director for the Mathematical Sciences program and an innovative educator in the classroom implementing novel pedagogical approaches such as discovery learning assessments in the mathematical modeling course. He also leads summer faculty workshops to mentor and train new junior faculty members. As the most recent recipient of the Department of Defense (DoD) STEM Advocate of the Quarter award, he is passionate about bridging the underrepresentation gap in STEM, especially with career fields centered on the Department of Defense modernization priorities like computer science and cybersecurity. Dr. Lee is a Lieutenant Colonel in the United States Army and has served in a variety of positions with increasing responsibility in the Military Intelligence and Operations Research and Systems Analysis (ORSA) branch.

**Shane Clark** received his Ph.D. from the University of Kentucky in 2020. While at the University of Kentucky, Shane was an active member of the department in research, scholarship, and teaching. His doctoral research was on the intersection of algebraic topology, category theory, and fixed point theory. Upon graduation, he joined the United States Military Academy as an Assistant Professor. While at West Point, he has broadened his research to include nutrition science, sports analytics, and data science.

# Contributed Paper Sessions
## Organizer: Kathy Turrisi, Centenary University

## General Contributed Papers, Session 1: Room 308

2:00–2:13: **Open Educational Resources and Technology in Differential Equations**
Revathi Narasimhan, Kean University

2:15–2:28: **Bringing Mathematics Closer to Hispanic ELL Students**
Jacqueline Aquino and Sandra Zak, Monmouth University

2:30–2:43: **An American Woman in Germany: The Case of Mary Winston**
Lawrence D'Antonio, Ramapo College of New Jersey

2:45–2:58: **Improving Student Performance With ILS Based Student-Teacher Pairings**
Devon Zillmer, West Point Military Academy

3:00–3:13: **Analysis of Books on Collegiate Pedagogy to Improve Teaching Practices**
Alexander T. Withenbury, West Point Military Academy

## General Contributed Papers, Session 2: Room 401

2:00–2:13: **Analysis of Navigation Solution Parameters Affected by High-latitude Ionospheric Scintillation**
Genevieve Tang, West Point Military Academy

2:15–2:28: **Mathematical Model for Treating Solid Tumors with Chemotherapy and Angiogenic Inhibitors**
Antonio Mastroberardino, West Point Military Academy

2:30–2:43: **Research Games as Network Generators**
James Q. Sherrell, West Point Military Academy

**2:45–2:58: Using Deep Neural Networks to Solve Variational Models of Microstructure**
Ensela Mema, Kean University;  Jaroslaw Knap and Ting Wang, Army Research Laboratory, Aberdeen Proving Ground

**3:00–3:13: Private Distributed Computation**
Malihe Aliasgari, Kean University

## General Contributed Papers, Session 3: Room 501

**2:00–2:13: The solution to an Open Problem about the Stochastic Comparison of Parallel Systems**
Mahmoud Affouf and Jiantian Wang, Kean University

**2:15–2:28: Equity Premium Puzzle: The Rational Finance Approach**
Abootaleb Shirvani, Kean University

**2:30–2:43: On-line Coloring of Proper Intervals with Bandwidth**
Israel Curbelo, Kean University

**2:45–2:58: Words without Weight: Tailoring Sentiment Dictionaries for Food Culture**
Si Park, West Point Military Academy

**3:00–3:13: Using Absement in Calculus I**
Agnes Azzolino, Middlesex Community College

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

# Lunch Discussion Tables

## Organizer: Kathy Turrisi, Centenary University

1. **The Cornucopia of Things I Do with Math**, led by Ken Ono, University of Virginia
2. **Building on Student Thinking**, led by April Ström, Chandler-Gilbert Community College
3. **The Mathematics of Data Science: Challenges and Opportunities**, led by Jose Perea, Northeastern University
4. **Working in Another Discipline**, led by Diana Thomas, West Point Military Academy
5. **Social Justice Assignments for Pre-Service Elementary School Teachers**, led by Sandra Zak, Monmouth University

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 Garden Restaurant, 943 Magie Ave, Union, 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](bookstore.ams.org/maa-press-browse)

# Future Meetings

**MAA-NJ.** The Fall 2023 MAA-NJ Section meeting will be a joint meeting with the EPaDel section at Villanova University on Saturday, November 11, 2023.

The Spring 2024 MAA-NJ Section meeting will be held at Rowan University on Saturday, March 23, 2024 joint with MATYCNJ.

**GSUMC.** The 2024 Garden State Undergraduate Mathematics Conference will be held in conjunction with the Spring Meeting of the NJ Section at Rowan University on Saturday, March 23, 2024.

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

**MATYC.** Please visit our MATYCNJ website (https://matycnewjersey.wixsite.com/matycnj) for information about our Fall 2023 MATYCNJ conference.

# Metro NY Annual Meeting

The Metropolitan New York Section of the Mathematical Association of America (MAA) is soliciting abstracts for the Contributed Paper and Poster Sessions of its 2023 Annual Meeting to be held at Pace University in Manhattan on Saturday, April 29, 2023. All interested professionals in academia and industry, as well as college and high school students, are encouraged to submit an abstract. Abstracts received by April 1, 2023 will receive full consideration.

The Metro NY Section welcomes ALL attendees. To submit an abstract or to register for the meeting, see http://sections.maa.org/metrony/

# Polyplane - Exploring the Natural Laws of Shape

Alex Kontorovich and Glen Whitney are producing a compact traveling art/science exhibition celebrating the beauty and structure of three-dimensional shapes. Visitors will wander along a constellation of diverse geometric forms, each precisely placed according to its numbers of sides, edges, and corners. From this placement, a natural law that has informed centuries of human inquiry becomes manifest: the Euler Polyhedron Formula. The premiere installation of Polyplane will take place outside the Hill Center on Rutgers University's Busch Campus 2023 April 19 through May 3. To learn more about Polyplane and how you can participate go to: https://www.polyplane.org

# Call for Contributed Papers, Topics for Special Sessions, and Lunch Table Discussion Topics
## for the Fall 2024 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](mailto: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](mailto:Kathy.Turrisi@centenaryuniversity.edu).

## NJ-NExT

NJ-NExT is a program like the [national NExT project](#), but is specifically targeted at faculty in the MAA-NJ Section. NJ-NExT targets new-ish faculty teaching mathematics and statistics in institutes of higher education all throughout New Jersey. The goals of our program are similar to the national goals: we aim to support new faculty in the MAA-NJ section in their teaching, and to help these faculty integrate into the profession. The program is open to full-time faculty in mathematics departments in NJ who are entering their first through fourth year of full-time teaching. We are now accepting applications for our next cohort. For more information, please contact Susan Marshall [smarshal@monmouth.edu](mailto:smarshal@monmouth.edu) or Chung Wong [CWong@ccm.edu](mailto:CWong@ccm.edu).

# New Jersey Section Award
# For Distinguished
# College or University Teaching of Mathematics

## Dr. Aihua Li

The New Jersey Section of the Mathematical Association of America (MAA) is pleased to present its 2023 sectional award for Distinguished College or University Teaching of Mathematics to Dr. Aihua Li of Montclair State University.



Dr. Li is a dedicated and gifted teacher and mentor. Students and colleagues describe her as both approachable and motivating, teaching students the beauty of mathematics, how it works, and how it relates to the real world. Dr. Li supports and encourages students to reach high academic standards, to conduct mathematical research, to publish peer-reviewed research, and to build career paths. Dr. Li believes students learn better by exploring and by doing research and that the most valuable commodity she can give to students is her time and love of mathematical research that opens the door to the research mathematics world. She has mentored over 50 undergraduate students in mathematical research, supervised 17 masters' theses and collaborated with more than 10 doctoral or master students from other schools. Her students have published 23 peer-reviewed research papers, delivered over 25 poster presentations, presented many research talks at conferences, and received numerous awards for their research. Dr. Li seeks out and mentors students from underrepresented populations, serving as Director of the Montclair Louis Stokes Alliance for Minority Participation from 2015-2018. Dr. Li helps her students gain confidence and

achieve potentials they did not realize they had. Students describe their experience working with Dr. Li as life-changing, with benefits beyond mathematics.

> "… *Dr. Li did not give up on me. She gave* **more** *of her time, energy, and resources to help me succeed. This incredible display of perseverance has taught me more about life than just mathematics.*"

Dr. Li brings the same spirit of exploration and guidance to the classroom that she brings to mentoring research. She adapts to and supports her students while motivating them to learn and understand challenging mathematical concepts. She provides extended office hours, helping students at night and on weekends to work around their busy schedules. She uses innovative pedagogical methods, such as computer-produced examples and a discovery approach to learning theorems in an abstract algebra course. She uses formative feedback and surveys to better understand her students' needs and differentiates assignments to challenge advanced students and provide guidance for students who require more filling of gaps.

> "*Instructor was very approachable; was able to "hint" at an answer that encouraged student to reach a solution on his own.*"

Dr. Li also supports math majors who want to pursue careers in industry. In 2017, she obtained a grant from the MAA program, Preparation for Industrial Careers in the Mathematical Sciences (PIC Math) to create a project-based course with real-world projects provided by industry. The course was designed to improve students' skills needed by industry, like statistics, data science, and programming (Python, R, etc.), as well as to develop soft skills, including working in teams and for a stakeholder. The students worked on projects from companies such as Citigroup and Staples and made transformative recommendations to Staples leading to internships and job offers.

> "*I feel like PIC math has truly helped us not only see how math is used to solve real life problems but actually put us in these scenarios.*"

Dr. Li shares her expertise with the wider mathematical community. She has served as a mentor in the Association for Women in Mathematics (AWM) Mentor Network and a Council for Undergraduate Research (CUR) Council member. She

served as the Director of the MAA National Research Experience for Undergraduates (REU) Program's Summer REU at Montclair in 2008, 2013, 2014, and 2022. She organized a National Security Agency (NSA) sponsored regional faculty workshop on REU Issues in 2013 and co-organized the Garden State Undergraduate Mathematics Conference from 2010-2013. She has published articles on mentoring undergraduate research and on global aspects of teaching and pedagogy, and she has presented numerous talks on these subjects. She was recognized for her work with a Faculty Mentoring Award from the Council on Undergraduate Research in 2013 and the University Distinguished Scholar Award for 2013-2014 Academic Year from Montclair State University.

Dr. Li is an active member of the New Jersey Section of the MAA, serving in many roles on the Executive Board including Chair of the section from 2017-2019.

Dr. Diana M. Thomas, Professor of Mathematics at the United States Military Academy at West Point, nominated Dr. Aihua Li for this Distinguished Teaching Award.

## Response from Dr. Li

It is a great honor to receive this Distinguished Teaching Award from MAA New Jersey Section. I would like to thank all the colleagues of mine in the Department of Mathematics at Montclair State University for providing support to my teaching at MSU throughout the years. Special thanks to Dr. Diana Thomas, a former colleague at MSU, for guiding me on mentoring student research and for many conversations with me on teaching related topics.

I agree with the saying that teaching is "to instruct by precept, example, or experience" and I believe that the best way to learn something is to do it. Learning through doing research enhances the students' learning process and helps them build on appreciation of mathematics. Throughout my teaching career, I have used student research projects as an integrating educational force to help train students in the process of mathematical investigation, sparking their interest in mathematics and its applications to the real world, and encouraging them to consider a career in mathematics. I have been honored to guide numerous research students over the years and have shared an important time in their lives.

The positive academic changes in my students, their advancement to a better, more improved life, and their newly instilled passion for a subject I deeply love are so rewarding, I can think of no other profession as fulfilling.

## 2022 Sr. Stephanie Sloyan Award for Distinguished Service
## New Jersey Section of the Mathematical Association of America

### Dr. Paul von Dohlen

The recipient of the 2022 Sr. Stephanie Sloyan Award for Distinguished Service from the New Jersey section of the Mathematical Association of America is Dr. Paul von Dohlen, Professor of Mathematics from William Paterson University (WPU).

Paul has served in various leadership positions within the section from 2008 to 2022, beginning as a member of the hosting committee for the spring 2008 section meeting at WPU. Since then, he has volunteered as the Book Sales Coordinator (2009-14) and Web Administrator (2011-18) and was elected to the positions of Treasurer (2014-18), Chair-Elect (2018-19), Chair (2019-21), and Past-Chair (2021-22). He also served on multiple standing and ad hoc committees throughout his tenure on the executive board. Most notably, Paul was the chair of the section through the Covid-19 pandemic years and lead us through the first three virtual meetings in the history of the section.

Paul earned a B.S. in Mechanical Engineering and M.S. in Applied Mathematics from Columbia University, and a Ph.D. in Mathematics from Stevens Institute of Technology. His research interests include Dynamical Systems, Numerical Analysis, Mathematical Simulations, Mathematics in Sports, Data Science, Mathematics Education.

The New Jersey Section is delighted to have benefited from the many years of service provided by Paul over the past fifteen years and in appreciation for his contributions has awarded him with the 2022 Sr. Stephanie Sloyan Award for Distinguished Service.

# Remembrances

During the time since the Fall 2022 meeting, MAA-NJ has lost two members, Patricia (Pat) Kenschaft and Theresa (Terry) Michnowicz, who made fundamental contributions to both the New Jersey section and the national association. Both were wonderful people --- kind-hearted, caring, approachable, welcoming, and always willing to listen and engage in conversations. They were both committed to the teaching, learning, and advancement of mathematics. They were both active in the mathematics community and were officers in the MAA at the national and local levels.

## Patricia Kenschaft (1940-2022)

Pat Kenschaft completed her PhD in functional analysis at the University of Pennsylvania in 1973. She then joined the Mathematics department at Montclair State University and taught there for 32 years, retiring in 2005. Pat's career was distinguished by her wide scope of interests, from mathematics to equity to organic gardening. She was an author of eight books and the host of a live weekly call-in radio talk show "Math Medley" (1998-2004). Pat was dedicated to changing systems. She was an energetic advocate for equity in mathematics and worked to improve the status of women and minorities in the mathematical community. On this topic, Pat wrote *Change is Possible: Stories of Women and Minorities in Mathematics* (AMS, 2005), and edited and/or contributed chapters to *Winning Women into Mathematics* (MAA, 1991), *Complexities, Women in Mathematics* (Princeton University Press, 2005) and "Multicultural and Gender Equity in the Mathematics Classroom" (1997 NCTM Yearbook), which detailed a series of "micro-inequity skits" highlighting the sores of small injustices that would occur daily to females in mathematics.

In 1988, Pat founded the summer school "Project for Resourceful Instruction of Mathematics in the Elementary School" (PRIMES). Over seven years, supported

by 14 grants, she served as director and supervised math professionals to teach mathematics to elementary school teachers in nine New Jersey school districts. Her work was summarized in her 2005 AMS Notices article "Racial Equity Requires Teaching Elementary School Teachers More Mathematics."

Pat's interest in the environment led her to co-author *Environmental Mathematics in the Classroom* (MAA, 2003). She was an active member of the SIGMAA Environmental Mathematics and the chair of the MAA's Committee on Mathematics and the Environment (2000-2004).

Pat served MAA-NJ on the Executive Board in many roles. She served as our section Governor from 2006 to 2009, and served as Vice Chair for Innovations, Vice Chair for Speakers, and Vice Chair for Two-Year Colleges. For her commitment, service, and dedication to the section, she received the 2012 Sr. Stephanie Sloyan Distinguished Service Award from MAA-NJ.

Pat was the founding president of the New Jersey Association for Women in Mathematics in 1981 and served as the first chair of the MAA's Committee on Participation of Women (1987-93). She was the recipient of the 2006 Louise Hay Award from the Association for Women in Mathematics and the 2013 AWM Etta Zuber Falconer Lecturer at MathFest. Pat was selected a 2021 Fellow of the AWM "for almost 50 years of sustained and lasting commitment to the advancement of underrepresented groups in the mathematical sciences."

**Quotes:**
"Pat was a great colleague to have in the Department --- very friendly to her colleagues and committed to her students. Pat and I drove to MAA-NJ Section meetings in one car a few times. It was my pleasure spending time with her and having conversations about many things including mathematics, politics, justice, equity and inclusiveness, the environment, and our extended families. I will always cherish those times and the wisdom I gained from my conversations with her. I will miss her. May her soul rest in peace."
*Mark Korlie, Montclair State University, former MAA-NJ Governor and Chair*

"Both Pat and Terry were mentors to me. When Pat retired, she gifted me her books. I have her Halmos and her beloved Dugundji Topology books among many more. Pat was on my hiring committee, and she made it a comfortable interviewing experience. I commented to her after I started at MSU how pleasant

of an interview it was and she remarked, "Why wouldn't it be?" She was a team builder, kind, generous and inclusive."

*Diana Thomas, United States Military Academy*

"I knew Pat for so long, a long time before both of us retired, that I can't remember when or how I met her. Quite possibly, I met her at a NJ MAA Section meeting. Equally possibly, I met her at a national meeting. She was at Montclair State University; I, at Rutgers - New Brunswick. She spoke gently, but worked incessantly for justice for all, especially for those from backgrounds historically infrequent in math and/or academe.

As member and maybe chairperson of the MAA Committee on the Participation of Women, Pat helped Sue Geller produce the Micro-inequity Skits at the Summer Meetings 1988-'90. A few MAA and AMS stalwarts acted in them - Jerry Porter from UPenn among them. I hope - but cannot produce evidence - that these skits reduced the frequency of micro-inequities. In these times of discouragement and cynicism, it is good to remember Pat as an example of those who celebrate incremental progress while working toward long-term goals. "

*Amy Cohen, Rutgers University (emeritus), former MAA-NJ Governor*

"Pat had many interests, and never hesitated to talk about them with people and to advocate for what she felt was important, very forthrightly, annoying some people. Her microinequity skits at national mathematics meetings called attention to problems in our profession. She really worked hard on a range of things. In the mathematical context, she wrote books on women in mathematics, and minorities in mathematics. She worked with Ben Fusaro in the Environmental Mathematics SIGMAA and was active locally in Montclair on environmental issues. She wrote books to try to help people like mathematics, and hosted a weekly radio show, Math Medley, for quite a few years where she interviewed someone different each week about their work in mathematics at a level that people would understand.

She had a large garden at her house in Montclair, which she gardened entirely organically (including her lawn); she had an enemy, Fatty the groundhog, who would persistently steal her tomatoes. But I learned a lot about organic gardening from her. She had a brother who was mentally challenged and she helped enable him to lead as normal a life as possible. Her husband, Fred

Chichester, was an engineer, but when he retired he started working with students in the local schools who were having trouble with mathematics."

*Bonnie Gold, Monmouth University (emeritus),*
*former MAA-NJ Governor and Chair.*

## Theresa Michnowicz (1934-2023)

Terry Michnowicz had an intense love and respect for the discipline of mathematics, to which she devoted a lifetime of commitment and study. After earning her Bachelor's and Master's degrees in Mathematics from Rutgers University, Terry joined the Department of Mathematics at New Jersey City University and taught there for more than 50 years, before retiring in 2017. She was a passionate promoter of mathematics and was a long-time chair and organizer of NJCU's annual Mathematics Awareness Day. Terry was a founding faculty member of NJCU's Computer Science Department and was a dedicated faculty member who worked diligently to improve NJCU's diversity and inclusiveness.

Terry was an extremely active member of the MAA at the national and local levels for many years and was a leader of MAA-NJ. Terry served as the section's Governor from 1997-2000 and was Chair of the section from 1993 to 1995. She was part of the Executive Board of the section for over two decades, serving as the section's Vice Chair for Speakers and Vice Chair for Innovations. Terry was responsible for introducing many aspects of MAA-NJ meetings. For example, the lunch discussion tables, copied by other sections for their meetings, was an idea due to Terry. To honor her for her commitments and many services to both MAA-NJ and the national association, Terry was the recipient of the MAA's 1995 MAA Meritorious Service Award, and MAA-NJ's 2006 Sr. Stephanie Sloyan Section Award for Distinguished Service.

Terry served for many years as the person who made sure the MAA-NJ section ran smoothly. If something didn't get done, Terry either did it or found someone to do it. She actively mentored section members and actively recruited members to serve in leadership positions. The New Jersey section of the MAA is grateful for all the contributions that Terry made.

**Quotes:**

"Terry was an institution who made MAA-NJ into one of the premier Sections of the MAA. She cared deeply about the Section and was one of its most influential leaders. When I first joined our Section I found it odd that Terry served as its Innovations Officer, a position whose purpose was unclear to me. But I realized soon enough why Terry deserved this title as it became apparent that she was the true mastermind behind the Section, someone who was constantly sharing her creative ideas to enhance Section activities and using her vast network to help the Section grow over the years.

Terry was very generous with her time in mentoring the many people under her wing that were involved in the Section, including myself. I always felt that Terry was my champion, someone who always believed in my ability to serve the Section. I would never have been able to become chair of the Section if not for her constant encouragement to be more involved and take the lead when the opportunity arose. I can recall the many times where it was impossible to say no to Terry when she requested that I get involved only because she had the ability to convinced you that it was the right thing do. This has left a deep impression on me and is something about Terry that I try to copy when I mentor others."

*Hieu Nguyen, Rowan University, former MAA-NJ Governor and Chair*

"Independent of what position she officially held, for many years Terry was the person who made sure the section got what it needed to do taken care of. If the chair of the section or the person responsible for putting the program together didn't get it done, Terry did. I remember specifically one time when the chair was basically "missing in action" and Terry took over as chair. And whatever she took on got done and got done right. I learned from Terry the importance of having someone in an organization who does this - who steps up whenever it's needed to make sure things are done properly and run smoothly. For society to function, we need people who will do this.

Terry was a strong woman who was gentle in her approach - when folks disagreed with her and decided not to take her advice, she didn't protest - she looked a little unhappy, but accepted the result quietly, at least in my experience. I admired and learned from her."

*Bonnie Gold, former MAA-NJ Governor and Chair*

"Terry was always such a sweetheart. Terry was part of the executive board for MAA-NJ when I was Treasurer and Chair. I really can't imagine MAA-NJ without her! She was so passionate about the organization and I'm pretty sure she was the one that got me involved on the board."

*Cathy Liebars, The College of New Jersey, former MAA-NJ Chair*

"Terry was a mentor to me and actively recruited me to get more involved in MAA-NJ. I am amazed by her energy and all the things she accomplished.  Twenty years ago, I spoke about public key encryption at a New Jersey City University's Math Awareness Day that Terry organized. I thought I was going to be speaking to a small classroom of students. But no! Terry had recruited a least a hundred students to be there. It was a very lively, wonderful event and represents the enthusiasm that Terry brought to championing mathematics."

*Tom Hagedorn, The College of New Jersey,*
*former MAA-NJ Congress Representative and Chair.*

"I first met Terry at the MAA-NJ Section 40th Anniversary Meeting held at Lucent Technologies (Bell Lab Innovations), Murray Hill, NJ on November 9, 1996. It was my first MAA-NJ Section meeting. She approached me at that meeting, introduced herself, and encourage me to continue attending the meetings. After that meeting, she kept in touch with me, and it was my pleasure to see her and chat with her at other meetings: MAA-NJ Section meetings, Joint Mathematics Meetings, and MathFest. It was through Terry's encouragement that led me to start serving as an officer of the MAA-NJ Section. She was committed to diversity and inclusiveness, and worked diligently to find and encourage members of the Section to consider serving as officers of the Section. I will miss Terry. May her soul rest in peace."

*Mark Korlie, Montclair State University, former MAA-NJ Governor and Chair*

# 25-year Members of the MAA

The section congratulates Robert G. Andre, Elizabeth B. Uptegrove, and Raymond Viglione for their 25 years of MAA membership.

# Social Media Information

Check us out!

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| Facebook: | www.facebook.com/maanewjersey |
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**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.

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**New Jersey Undergraduate Mathematics Competition Organizing Committee**: Katarzyna Kowal (co-director), Ramapo College of NJ; Marek Slaby (co-director), Fairleigh Dickinson University at Florham Campus; Ken McMurdy, Ramapo College of NJ; David Molnar, Rutgers University at New Brunswick; Tom Leong, University of Scranton.

# Acknowledgments

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Starting June 1, 2023, we have an open position for recording secretary.  If you are interested in applying, please email Samantha Doluweera at sdoluweera@brookdalecc.edu.

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