

THE SEAWAY CURRENT

Newsletter of the Seaway Section of the Mathematical Association of America

SPRING 2024
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THE SEAWAY CURRENT

The Seaway Current is published at least twice per year by the **Seaway Section** of the **Mathematical Association of America** (MAA) for the benefit of its members. Its pages are open to all members of the MAA and, by invitation to others, for the exchange of information and opinion. Contributed announcements, articles, and editorials are welcome and should be sent to the editor.

Material may be submitted to the editor by e-mail. Opinions expressed in this newsletter are those of the editor or of individual contributors and do not necessarily represent the views of the MAA or of the Seaway Section.

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SEAWAY SECTION SPRING MEETING

SUNY Fredonia

April 19-20, 2024

Check out the program!

Thank You to the Math Department
for hosting us!

SPRING 2024: THE INVITED SPEAKERS

Friday Banquet Speaker:

**Artificial Intelligence From
A Simple Mathematical Perspective**

Shahin Mehdipour Ataei, SUNY Fredonia

Abstract: In this talk, we delve into the fascinating world of artificial intelligence (AI) through the lens of simple mathematical concepts. Artificial Intelligence has become an integral part of our modern lives, revolutionizing industries and reshaping our understanding of technology. However, behind the complex algorithms and advanced neural networks lies a foundation built upon basic mathematical principles.

Throughout the session, we will explore how fundamental mathematical concepts such as linear algebra, probability theory, and calculus underpin the development and functioning of AI systems. By breaking down these intricate AI processes into their mathematical components, we aim to demystify the technology and make it more accessible to a wider audience.

Moreover, we will discuss the historical evolution of AI and its connection to mathematics, tracing its roots from Alan Turing's pioneering work to the cutting-edge machine learning models of today. By understanding the mathematical principles driving AI, attendees will gain insights into how these systems learn, reason, and make decisions.

Furthermore, we will examine real-world applications of AI from a mathematical perspective, ranging from image recognition and natural language processing to autonomous vehicles and recommender systems.



Continued on the next page.

Abstract for the Friday Banquet Talk continued. By analyzing these applications through the lens of mathematics, attendees will develop a deeper appreciation for the role of mathematical thinking in shaping the future of AI.

Ultimately, this talk aims to equip attendees with a foundational understanding of artificial intelligence rooted in simple mathematical concepts. By bridging the gap between AI and mathematics, we hope to inspire curiosity and empower individuals to explore the limitless possibilities of this transformative technology. Join us on a journey where mathematics meets artificial intelligence, unlocking new insights and opportunities along the way.

SPRING 2024: THE FRIDAY WORKSHOPS

Exploring Alternatives to Traditional Grading

by Daniel S. Look, St. Lawrence University

3:00-5:00, April 19

Free to attend. Advance registration required. [See the registration form for details.](#)

Abstract: In the classroom, evaluation typically manifests as letter/numerical grades, where points are allocated for assessments and a weighted average determines final grades. However, outside the classroom, evaluation takes a markedly different form. Recommendation letters and performance reviews do not typically use numerical scores, while peer reviews for journals offer limited options: reject, revise and resubmit, or accept. Both peer and performance reviews incorporate feedback loops: engage in an action, receive feedback, reflect on feedback, enact changes, and iterate the process. This feedback loop is indispensable for learning; seldom do we perform a task just once and consider it complete. Classrooms tend to be the outlier, often lacking this feedback loop. Students submit assignments and receive a 'locked in' grade accompanied by feedback that may go unread, or if read, may not be comprehended or deemed actionable.

In this interactive workshop, we will explore alternatives to the traditional grading scheme, such as ungrading, specifications grading, standards-based grading, contract grading, proficiency grading, and others. Whether you are considering incremental adjustments or a comprehensive overhaul of your course, the aim is for attendees to depart with fresh ideas to contemplate.

This workshop welcomes all participants, whether already immersed in alternative assessment methods or encountering the concept for the first time.



Seaway NExT Workshop

12 - 2:45, April 19

Free to attend. Advance registration required. [See the registration form for details.](#)

Join Seaway NExT for a gathering ahead of the Friday afternoon workshop! “NExT” is short for “New Experiences in Teaching” — and *all* of us can have new experiences and gain from new experiences. *All* faculty, at any stage of their careers, are welcome at the Seaway NExT workshop and there is no cost to participate for anyone. Please invite faculty newly hired into the Section (and don't forget: we're inviting you, too!).

This meeting's Seaway NExT program is as follows:

- 12:00-12:15 Welcome
- 12:15-1:15 Lunch
- 1:15 - 2:45 Discussion: Welcoming and inclusive classes - how to make mathematics more accessible

To register for the Seaway NExT Workshop, register for the Seaway meeting using the online form and **please also send an email message** directly to [Jeff Johannes \(johannes@geneseo.edu\)](mailto:johannes@geneseo.edu), Seaway NExT Committee Chair, so that the committee can plan for the provided Friday lunch and other similar planning purposes.

DO YOU KNOW WHY WE HAVE SUCH *AWESOME* SPEAKERS?

It's all due to the hard work of our Program Chair (Cesar Aguilar), Chair Elect (Brad Emmons), the members of the Program Committee., and our local organizers. These folks work hard to make sure we offer interesting programming with a variety of perspectives and topics, and they are already hard at work to organize the speakers at *next* meeting!

SPRING 2024: SATURDAY INVITED SPEAKERS

Tied up in Knots — An Adventure in Undergraduate Research

Aaron Heap, SUNY Geneseo — Gehman Lecture



Abstract: Join us for an introduction to knot theory and knot mosaics. Knot theory is a fun branch of mathematics with many useful applications. This talk isn't about those! We will discuss some knot theory, but we will also discuss some not theory. The not theory portion will involve some knot history, but it will also involve some not history because we will discuss some knot results from the present. Make sure you are present because those who are not present might miss out on knots but will not miss out on presents. There will be an occasional knot pun, a smattering of knot fun, and a revelation that the work is not done.

Matroids You Have Known

Nancy Ann Neudauer, Pacifica University



Abstract: Matroids show up several times in the undergraduate curriculum, but most of us don't know them by name. In 1933, three Harvard junior-fellows tied together some recurring themes in mathematics, into what Gian Carlo Rota called one of the most important ideas of our day. They were finding properties of dependence in multiple mathematical structures. What resulted is the matroid, which abstracts notions of algebraic dependence, linear independence, and geometric dependence, thus unifying several areas of mathematics. The usefulness of matroids to pure mathematical research is similar to that of groups – by studying an abstract version of phenomena that occur in different realms of mathematics, we learn something about all those realms simultaneously.

We find that matroids are everywhere: Vector spaces are matroids; We can define matroids on a graph. Matroids are useful in situations that are modeled by both graphs and matrices. Yet many matroids cannot be represented by a graph nor a collection of vectors over any field. We consider the essential role of matroids in combinatorial optimization.

Is anyone truly using math to understand real-world problems?

Thomas Pfaff, Ithaca College

Abstract: If the response was no, there would be no talk to give. In my humble opinion, the math community is frequently unaware of the math being used outside of math journals. There are several good reasons for this. This session aims to break down some of these barriers by providing examples of math being utilized to help people understand modern-day challenges. From electric vehicles to whales, we'll look at some interesting mathematics that can be utilized to supplement our courses or serve as the foundation for student projects.



Looking for times and locations for the workshop and invited lectures?

Check out the [online meeting program](#) for all of the up-to-date details and information!

SPRING 2024: THE INVITED SPEAKER BIOS

SHAHIN MEHDIPOUR ATAEE successfully earned his Ph.D. in Computer Engineering from Eastern Mediterranean University, Cyprus, in 2018. His research primarily centered around Semantic Web Services, with a specific emphasis on crafting intelligent communicating agents. Post-graduation, his professional journey has led him to explore diverse facets of

Machine Learning and Artificial Intelligence.

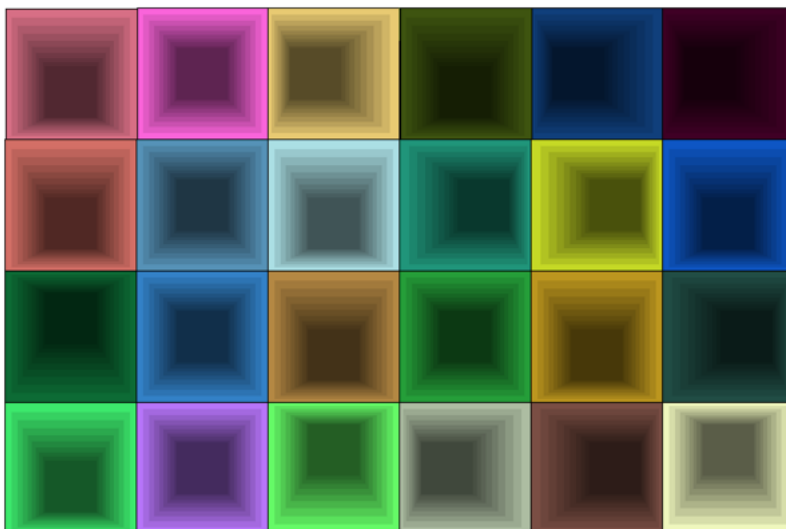
Having started his career as a professor in Computer Engineering and Science courses in 2014, Shahin now serves as an Assistant Professor of Computer Science at the State University of New York in Fredonia. His dedication to both academic research and teaching underscores his commitment to advancing knowledge and fostering learning in the field of computer science.

AARON HEAP earned his PhD in Mathematics from Rice University in 2004, studying Algebraic and Geometric Topology. He is a Roemer Supported Professor at SUNY Geneseo, where he serves as Chair of the Department of Mathematics. He has been honored with several teaching awards, including the SUNY Chancellor's Award for Excellence in Teaching. His current research interests include knot theory, mapping class groups, 3D printing, and online educational tools. Beyond his academic passions and job-related activities, Aaron enjoys spending time with his wonderful wife, playing games with his two kids, doing construction and remodeling work, and completing items from the long list of projects that his wife makes him do.

DANIEL (DAN) M. LOOK received his PhD from Boston University studying Complex Dynamics and he currently serves as the Rutherford Professor of Mathematics at St. Lawrence University. His current research includes the dynamics of rational functions (with a particular interest in Sierpinski curve Julia sets and Julia sets related to the geometric action of circle inversion), text mining/stylometry, popular culture uses of mathematics in early 20th century pulp fiction, and mathematics pedagogy. Among other work, he has performed stylometric analyses of Robert E. Howard's *Conan* stories and their various pastiches and written about H. P. Lovecraft's use of non-Euclidean geometry for an invited paper in *Lovecraft Annual*.

NANCY ANN NEUDAUER is the Thomas and Joyce Holce Professor of Science and Professor of Mathematics at Pacific University, Associate Secretary of the MAA, and Co-Director of the Center for Undergraduate Research in Mathematics (CURM). She received her PhD in Mathematics from the University of Wisconsin and her research in matroid theory and graph theory has been supported by grants from the Simons Foundation, the Fulbright Program, the National Science Foundation, and an endowed Research Chair. She is on the Board of Directors and the Congress of the MAA, Program Chair for the Cascadia Combinatorial Feast since 2001, was Visiting Mathematician to the national offices of the MAA, Director of the MAA Dolciani Mathematics Enrichment Grant Program for 13 years, a PI on the NSF-funded META Math (the Mathematical Education of Teachers as an Application of Mathematics) project, Associate Director for PNW Section NExT for 19 years, and recipient of a Distinguished Teaching Award and a Meritorious Service Award. As a Fulbright Specialist, her outreach extends to African Institute of Mathematical Sciences (AIMS) Centres in South Africa, Tanzania, Ghana, Cameroon, and Rwanda and she is the recipient of a Fulbright Global Scholars Award. She is particularly interested in bringing matroids to a wider audience by introducing them to working mathematicians and their students in every corner of the world.

TOMAS J. PFAFF is chair and professor of mathematics at Ithaca College. He is the author of two books: *R for College Mathematics and Statistics* (Chapman and Hall/CRC 2019) and *Applied Calculus with R* (Springer 2023). He also maintains the sustainabilitymath.org and briefedbydata.substack.com websites and blog.



What is this about?

The editor teaches a course that is an introduction to programming. As part of the course, students start with a program that is created by the instructor and modify the program under constraint, to demonstrate their understanding of the original program. But, once released into the world, the program is available for modification as anyone sees fit. This is one modification of the original artwork program, produced by the editor herself, because some students needed a little bit of motivation to get creative.

The mathematical expressions driving the creation of this kind of artwork is of perpetual fascination!

SECTION NOTES AND ANNOUNCEMENTS

SPRING 2024

Seaway Section Elections: Your voice counts!

During the Business Meeting, the section will hold elections for Two-Year College Representative and Treasurer. The incumbent Treasurer, Gordon Craig, has been nominated and accepted the nomination to run for a second term. The incumbent Two-Year College Representative, Claudio DiMarco, has declined a nomination to stand for a second term. At this time, no nominations are forthcoming from the Nominations Committee. Nominations can be made from the floor during the Business Meeting — if you are interested in running for either position, feel free to contact the Nominations Committee (Ryan Gantner, Patti Frazer Lock, Jolie Roat, Gary Towsley [chair]) for more information on the positions. Position descriptions are also included in the section bylaws, posted on the section webpage.

Additionally, Program Chair Cesar Aguilar is stepping down after the April meeting. The Executive Committee is charged with filling vacancies in the committee by appointment, but the committee would appreciate if interested individuals would contact the Nominations Committee or a member of the Executive Committee. Typically the Program Chair position is a two-year position and the individual filling that position rolls into the position of Chair-Elect for one year, Chair for two years, and then Past Chair for one year. More information on these positions is included in the section bylaws.

If you are looking for a way to get started in the section, you can take on all sorts of tasks that don't involve a formal title or election! **Are you a pro with the social media?** We need your help! Our Public Information Officer would like to step down, or at least be joined by a Facebook-savvy colleague. **Do you have ideas for fun events aimed at getting students involved in mathy hijinks?** Ask to be part of the Student Program Committee! **Want to lead a workshop on something?** Chat with the Program Chair — we are always looking for new events and things to keep our meetings interesting, fresh, and lively. And, we're always looking for ways to keep *you* satisfied with what the section offers . . . what better way to do that than to have you involved in making the offerings?!

Buffalo State University

Congratulations to Professor Hongliang Xu for winning a Fulbright Scholar Award!! Professor Xu coordinates the applied mathematics program at Buffalo State University, including the development programs that allow students from abroad to earn baccalaureate and master's degrees in mathematics from Buffalo State University. Professor Xu plans to use the support from the Fulbright Scholar Award to continue developing such internationally collaborative learning experiences. [Learn more about Professor Xu's plans on the university news site.](#) (Submitted by Jane Cushman, worded by the Editor)

Convergence: On This Day

Today is March 25, 2024. On this day, in 1539, Tartaglia told Cardano about his method of solving cubic equations. Who are [Tartaglia](#) and [Cardano](#)? You'll have to check out the information from MacTutor's website (or others) to find that out. I won't spill the tea, *you want to find out about this drama*. How'd I know that this happened today — the day that I'm wrapping up the Seaway Current? I was on the [Convergence](#) website poking around and came across the *On This Day* entry and just had to find out what Tartaglia told Cardano about . . . (Submitted by Elizabeth Wilcox)

Houghton University

Rebekah Yates, Professor of Mathematics, was recently announced as the winner of the annual Excellence in Teaching award at Houghton University. The following description of the award is taken from the university website:

The Houghton University Excellence in Teaching Award honors a faculty member who meets a variety of criteria set by the Faculty Development Committee, including: stellar classroom/lab/studio instruction and thorough knowledge of the subject matter; active encouragement of students to think creatively and critically through mentoring, service learning and other collaborative activities; and the development and improvement of teaching in learning in self and others.

Congratulations Professor Yates!! (Submitted by Jill Jordan)

New York State Association of Mathematics Teacher Educators (NYSAMTE)

Do you teach math content or pedagogy courses for future/current teachers? If so, consider joining NYSAMTE, the New York State Association of Mathematics Teacher Educators! As the state affiliate of the Association of Mathematics Teacher Educators, NYSAMTE is focused on connecting and supporting the work of math teacher educators (like you!). NYSAMTE is also committed to the preparation and on-going development of NY math teachers and is an approved sponsor of CTLE and partner affiliate of AMTNYS. Please visit the [NYSAMTE website](#) for additional information about the NYSAMTE mission, sponsored events, and how to become a member.

SUNY Plattsburgh

Two retirements on Jan. 1, 2024: Sam Northshield and Greg Quenell. *(Submitted by Sam Northshield)*

Congratulations to both Professors Northshield and Quenell on retirements well-deserved! We hope to see you at section meetings in the future, and hope that you enjoy this next chapter in your life!!

University of Toronto - Mississauga

Congratulations to Shay Fuchs! First for his successful publication of the textbook *Introduction to Proofs and Proof Strategies*. Here's a quick excerpt from the [description of Introduction to Proofs and Proof Strategies from the Cambridge University website](#): "With its focus on 'doing mathematics' through 200 worked examples, over 370 problems, illustrations, discussions, and minimal prerequisites, this course will be indispensable to first- and second-year students in mathematics, statistics, and computer science. " Definitely something to check out if you're teaching an intro to proofs course in the near future!

But also, for Shay's very recent publication of "[Investigating the Impact of Active Learning in Large Coordinated Calculus Courses](#)" with co-author Gurpreet Sahmbi in the International Journal of Research in Undergraduate Mathematics Education. This article describes a study on the impact of active learning on student learning in large first-year calculus classes. The authors found that the study supports the use of active learning techniques to improve student performance and learning, even in large courses, when implemented properly. If you find yourself teaching a large course, it's worth reading this article . . . and reaching out to colleagues like Shay in the section for ideas for how to implement active learning techniques in your classroom. *(Info on the publications submitted by Shay Fuchs, blurbs written by the Editor)*

SPRING 2024: ARTICLES

Report on the Strike at York University

Gordon Craig (Member of Unit 2 of CUPE 3903)

Local 3903 of the Canadian Union of Public Employees, the union representing part-time faculty and teaching assistants at York University, has been on strike since Monday the 26th of February, after a long and frustrating bargaining period going back to before the expiry of the previous collective agreement on the 31st of August 2023. The main issues in play are job security for part-time faculty members and wages and funding for all members. Other points of contention include protection for members from harassment and discrimination, and benefits (which are much less of an issue in Canada than in the US, since healthcare is not tied to employment status, but remain critical for members with long-term health conditions).

In Ontario and Quebec, most part-time faculty and TAs are unionized, leading to much better conditions than those enjoyed by our colleagues in the United States, but even with certain seniority protections, many of our members remain in a precarious situation, particularly in a city with an extremely high cost of living like Toronto. The pandemic shutdown led to many deferrals of bargaining between employers and unions, so there have been a lot of renewals of collective agreements in Quebec and Ontario recently, but these have all been concluded either without labor action or after a short strike (as in the case of Université Laval in Quebec City). As the specter of the winter term stretching into the summer and the anxiety of our students grows, it's time for the employer to come back to the bargaining table.

Learning About Literacy and Mathematics

The Algebra Project Visits SUNY Oneonta

Elyssa Stoddard (Department of Secondary Education & Educational Technology, SUNY Oneonta)

Toke Knudsen (Department of Mathematics, Computer Science & Statistics, SUNY Oneonta)

Last fall, in October 2023, SUNY Oneonta was visited by Bill Crombie, Director of Professional Development at the Algebra Project. Founded by Civil Rights activist Bob Moses in 1982, the Algebra Project is an organization focused on mathematics literacy with the explicit aim of helping students of color and low-income students develop the algebra knowledge and skills needed to succeed after their K-12 education (in college, a career, or whatever path they choose). As mathematics educators, we understand that algebra is a cornerstone to advanced mathematics and the math we use in everyday life. That is why we were excited for Bill's visit and to see how the Algebra Project could help our pre- and in-service secondary mathematics teachers, as well as SUNY Oneonta's Mathematics faculty, continue learning about how to support student learning.

Pre- and In-Service Teachers

Bill first had the opportunity to work with SUNY Oneonta's pre-service mathematics teachers when visiting our secondary mathematics methods course (taught by Dr. Elyssa Stoddard). Here, Bill gave students a brief overview of the Algebra Project, including how Bob Moses saw mathematics literacy as related to civil rights. He explained that while organizing people to vote is not in and of itself a radical act, organizing Black voters in Mississippi, whose right to vote was historically oppressed, was a radical act. Similarly, learning algebra is not a radical act until we think about the limited access to high-quality learning opportunities that students of color and low-income students have historically been afforded. Further, mathematical literacy, which the Algebra Project defines as the ability to read, write, and reason with mathematics, is necessary for students to understand and critique the world around them. Therefore, ensuring that all students develop algebraic knowledge and skills is a radical act that moves us towards a more equitable and just society.



Figure 1: Bill Crombie speaks at the workshop. Photo: RJ Hargrave.

Bill then used the example of $y = mx + b$ and “the cat sat on the mat” to illustrate the difference between how we traditionally think about literacy and mathematical literacy. Students discussed how we typically think of literacy in the phonetic sense where letters represent sounds, as in “the cat sat on the mat.” However, in mathematics letters (and symbols) represent ideas, not sounds, meaning students need to understand what idea each of them represents. In other words, to be mathematically literate, a student would not just be able to read $y = mx + b$ (i.e., “why equals emm ex plus bee”) but also be able to explain how it reflects a relationship between two variables that are changing at a constant rate.

Afterwards, students shared that this view of literacy with respect to mathematics was helpful as they sometimes struggle to see connections between mathematics and literacy in their other education courses. Students shared that because these courses at SUNY Oneonta include a mix of secondary education content areas, they sometimes feel things must be “light” on the mathematics so their peers can understand or are not intimidated. This, in contrast, was an opportunity to talk

about literacy with mathematics as front and center.

This continued into a subsequent workshop and public lecture (on October 17th and 18th, 2023, respectively), which were open to SUNY Oneonta community members, including local in-service teachers, faculty, and students. Here, Bill used the Trip Line game to illustrate how a culturally relevant, hands-on task could develop understanding of positive and negative integers. He also discussed how other mathematical topics, including those from elementary calculus, could be taught from an algebraic perspective (as opposed to the traditional analysis perspective) if students had also developed mathematical literacy; this is the focus of an NSF project that the Algebra Project, the National Society of Black Engineers, and the Kennesaw State University's Center for Innovation in STEM Education Research are currently collaborating on.

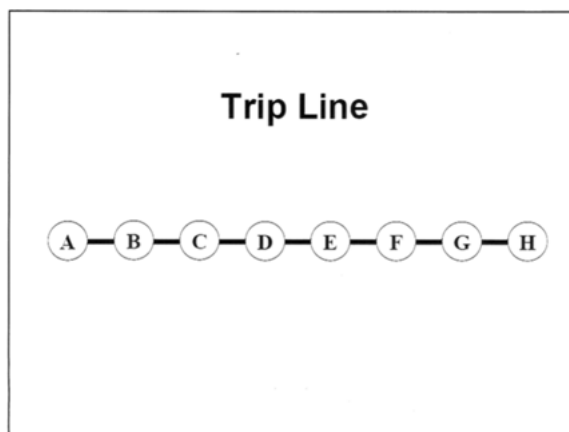


Figure 2: The board for the Trip Line game.

The Trip Line game consists of a board, as shown in Figure 2 and cards in three colors, green, yellow, and red. The board contains eight stations, labelled A, B, C, D, E, F, G, and H, that are connected as shown. Each green card has one of the letters A, B, C, D, E, F, G, or H on it, which represents a start station. Each red card likewise has one of these letters on it, which represents a finish station. The yellow cards represent movement and are marked with the number of stops and a direction. For example, 4R represents a movement of four stations to the right and 3L represents a movement of three stations to the left. Some yellow cards have an X on them, and they can be used as wildcards to go as many stations as desired in either direction. The three colors of the cards, drawn from the colors of a traffic light, correspond to the three features of a trip: start (green), movement (yellow), and finish (red). The aim of the game is for a player to present a hand of three cards, one green, one yellow, and one red, that corresponds to a trip: you start at the station indicated by the green card, then move as indicated by the yellow card to end up at the station indicated by the red card. For example, the green card H, the yellow card 7L, and the red card A, which corresponds to the following trip: start at H, move seven stations to the left, and end at A. Another example is the green card B, the yellow card X, and the red card E. In this case, the wildcard X is taken to be 3R, yielding a trip starting at B, moving three stations to the right to end at E. These trips remind us of trips on the subway or on a bus, activities that many are familiar with.

The trips in the game are metaphors for addition and subtraction: giving a start station and a finish station, how many stations do you have to move and in what direction? All you need to be successful in the game is to pay attention and count. Students in a mathematics class can find the x in equations scary, but Bill told the audience that students see the wildcard X in the Trip Line game, which corresponds to the unknown x in mathematical equations, as creative and making them feel stronger. The game is therefore a way to change the students' feeling toward mathematics.

Overall, the workshop and public lecture included engaging and lively discussions that many attendees found informative. With support from the Catskill Regional Teacher Center, a local in-service teacher who attended these events is working on using the Trip Line game in their classroom and further exploring how to develop their students' mathematical literacy. A pre-service teacher, who was not in the methods class meeting, shared:

Bill's message highlighted the importance of incorporating hands-on and valuable learning experiences . . . As a pre-service teacher, I appreciated hearing about his experience and viewpoint on certain curriculum as it is definitely something that I will keep in mind as I start to design my own lesson plans.

The following quote from a SUNY Oneonta student teacher, which echoes the sentiments of the methods students, shows that the discussion of mathematics literacy versus literacy also resonated:



Figure 3: Bill Crombie explains the rules of the Trip Line game. Photo: RJ Hargrave.



Figure 4: A workshop participant holds up a trip that starts at H, moves 7 to the left, and finish at A. Photo: RJ Hargrave.

During my time at Oneonta, I took several education classes which dealt with literacy in the content areas as course requirements. While the courses were engaging and offered useful suggestions and ideas, I always felt there was something missing. The Tuesday night session [the workshop] enlightened me as to what that something was. The literacy classes I attended were run by an English teacher. She readily admitted that she was not a math teacher, but she guided us in completing our assignments for math instruction. However, everything she did was based upon literacy in its phonetic sense. Her approach was that math students need to read word problems, mathematical texts, instructions, and vocabulary. What she was missing Bill put into words on Tuesday night; mathematical literacy is a conceptual understanding of reading mathematical expressions, terms, and symbols; an idea which is completely different from phonetic literacy. I have not been able to stop thinking about it and how much it informs the challenges I have seen in the classroom.

Faculty Members

During his visit to SUNY Oneonta, Bill interacted with faculty members from multiple departments. Besides Mathematics, Computer Science & Statistics and Secondary Education & Educational Technology, the events attracted faculty members from Africana & Latinx Studies, Sociology, Elementary Education & Reading, Physics & Astronomy, and Chemistry & Biochemistry. Faculty members turned out in large numbers not only for the workshop and the public lecture, but also to have breakfast, lunch, or dinner with Bill, as well as for informal meetings. Representatives of the SUNY Oneonta administration also came out to meet Bill, who had dinner with President Alberto Cardelle, Dean Tracy Allen, Dean Mark Davies, and Chief Diversity Officer Bernadette Tiapo after the public lecture. The dinner was lively, with so much conversation that Bill did not get to eat his meal until after the guests had left! There was praise for Bill's presentations and the mission and work of the Algebra Project all around, as well as praise for Bill's way of interacting with people.

Dr. Greg Fulkerson, Professor and Chair of Sociology, shared his impressions after a conversation with Bill over breakfast:



Figure 5: Bill Crombie interacts with SUNY Oneonta faculty members after the workshop. Photo: RJ Hargrave.

The visit was absolutely enjoyable and mind-blowing. I had no idea how close the Algebra Project was to the Civil Rights movement itself. I found Bill Crombie incredibly warm, knowledgeable, and engaging, and see why his program has become a success.

Dr. Fulkerson's enthusiasm is representative of the feedback we received from faculty members who attended the events or interacted personally with Bill; they all emphasized how much they got out of Bill's visit.

Following Bill's visit, several SUNY Oneonta faculty members began a discussion about the value of the Algebra Project and its program for our students and the teaching at the University. Dr. Valerie Rapson, Assistant Professor of Physics & Astronomy, who attended the public lecture, shared her impressions with us:

During Bill's talk, I kept thinking about how nice it would be if all my future students had been through the Algebra Project curriculum. Many of my introductory physics students struggle with algebra, and thus find physics very challenging. In many cases, though, it's not the physics they find hard but the computations that go along with it. A stronger foundation in algebra, and an overall improvement in math literacy would really set them up to be more successful. The Algebra Project seems like it helps students build critical thinking and problem-solving skills and bridges the gap between theoretical math and everyday life experience.

Dr. Toke Knudsen has the same experience teaching calculus at SUNY Oneonta. Often it is not the concepts of calculus that cause problems for the students, but rather they are held back by an insufficient mastery of the algebra necessary to solve the problems. In fact, there is an overall feeling at SUNY Oneonta that our students are not as prepared — not just in mathematics but overall — as we would like them to be. The Algebra Project is widely seen as a promising way to remedy this.

Looking Ahead

The overwhelmingly positive reception of Bill Crombie and the Algebra Project's program by students, faculty, and administration at SUNY Oneonta, as well as by the in-service teachers that attended the events, provides a fertile ground for more collaboration between the Algebra Project and the University. Dr. Bernadette Tiapo, Chief Diversity Officer at SUNY Oneonta, expressed definite interest in continuing to work with Bill, and many faculty members expressed an interest in supporting a continued collaboration with the Algebra Project.

Acknowledgments

The Algebra Project's visit to SUNY Oneonta was supported by the Office of Equity & Inclusion; the School of Science; the School of Education, Human Ecology & Sports Studies; the Department of Mathematics, Computer Science & Statistics; the Department of Secondary Education & Educational Technology; and the Department of Africana & Latinx Studies, as well as the Catskill Regional Teacher Center.

REPORTS & MINUTES SINCE FALL 2023

1. TREASURER'S REPORT – SPRING 2024

Gordon Craig, Seaway Section Treasurer

Now that we've had three post-pandemic meetings, it's possible to make (cautious) predictions about the future, so starting this year, I'll present a budget at the fall meeting, and financial statements at the spring one, but due to the residual uncertainty surrounding our subvention and meeting costs, I wanted to wait for the spring meeting to present budgetary projections for 2024 to the membership at the business meeting. Both the 2023 financial statements and the 2024 budget are presented below.

The good news is that we essentially broke even in 2023; the deficit of roughly \$900 can be accounted for by the purchase of promotional items for the section, which we'll sell to raise money in the future. Both meetings (which are by far the largest in- and outflows of cash for the section) broke even, thanks to the careful planning and diligent oversight of Diana Skrzydlo and her team at Waterloo and Maureen Cox and her colleagues at St. Bonaventure. (As a point of information, following MAA central office's accounting practices, speakers' honoraria and expenses are separate items from the meeting expenses, but the only invited speakers we had in 2023 were at the two meetings.)

The budget is extremely conservative; I don't anticipate that large a loss, but I wanted to be careful, since we've only had three post-pandemic meetings so far, each of which drew significantly fewer attendees than we had been used to getting before Covid, and we may be entering into a period of fiscal austerity, so I want to brace the membership for the worst-case scenario.

The only other information to add is that the executive voted on an ad hoc basis to raise invited speakers' honoraria from the previous level of \$100 to \$150. The level of \$100 had been unchanged since it was set in the noughts, so this increase is consistent with inflation over the intervening period. I'll present a motion at the spring meeting to formalize this practice.

Respectfully submitted,

Gordon Craig (Glendon College [York University]), Seaway Section Treasurer

2. THE EXECUTIVE & EXTENDED EXECUTIVE COMMITTEE MEETING – October 13, 2023

Present: Cesar Aguilar (Program Chair, Webmaster), Jane Cushman (Education and Policy Committee), Christine Uhl (Public Information Officer), Dan Look (future Randolph Lecture Chair), Leah Bridgers (Chair), Jeff Johannes (Section Representative, Liaison Coordinator), Jolie Roat (Secretary), Brad Emmons (Chair Elect), Gordon Craig (Treasurer), Darren Narayan (Gehman Lecture Committee)

(1) Approval of minutes from Spring 2023 Executive Committee meeting

- *Approved without dissent*

(2) Report from the Section Representative (Jeff Johannes)

- *MAA Connect could be a useful place for the section to host conversations and files. All MAA and non-MAA members can make an account to access MAA Connect.*
- *There is a proposal to amend the bylaws of the organization. In particular, the term for Section Representative will change from 4 years to 3 years. The Chair of Congress will also have a longer term. MathFest had good attendance in summer 2023 and will be in Indiana in summer 2024.*

(3) Reports from officers

a. Secretary (Jolie Roat)

- *No report*

b. Treasurer (Gordon Craig)

- *Is planning on doing the budget during the fall semesters and financial statements in the spring semesters*
- *We broke even at the Waterloo meeting and lost about \$1000 at the Siena meeting.*
- *There is some concern about low attendance at meetings. There are 38 people who have signed up for the banquet, however the contract was for 200 people.*

- *Our current balance is \$16,277.15 — we are okay to absorb some loss. Gordon will be reaching out to other treasurers to see what their registration cost is.*
- c. Two-Year College Representative (Claudio DiMarco)
- *Not present, no report*
- d. Program Chair (Cesar Aguilar)
- *SUNY Fredonia is confirmed for Spring 2024 — Bob Rogers will be the local host.*
 - *Still working on confirming York University in Toronto for Fall 2024.*
 - *There was discussion related to finding hosts for future meetings and ensuring meetings are spread out geographically in the section.*
- e. Chair (Leah Bridgers)
- *We are in need of a new chair of the Seaway Next Committee. It was suggested to reach out to national NExT to find out who are fellows in NYS from the last decade. Perhaps consider co-chairs.*
 - *The list of committee membership is being organized and updated.*
- f. Chair Elect (Brad Emmons)
- *No report*
- (4) Reports from committees and other Extended Executive Committee positions
- a. Program Committee (Cesar Aguilar)
- *No report*
- b. Student Program Committee (Keiko Dow)
- *Not present, no report*
- c. Randolph Lecture Committee
- *Dan will become chair of this committee at the end of the fall meeting.*
- d. Gehman Lecture Committee (Darren Narayan)
- *No report*
- e. Educational Policy Committee (Jane Cushman)
- *A new AP PreCalculus course is being offered to high school students (this is the first year).*
- f. Distinguished Teaching Award Committee (Hossein Shahmohamad)
- *Not present, no report*
- g. Nominations Committee (Gary Towsley)
- *Not present — The committee is currently working on getting two nominees for Section Representative*
- h. Seaway NExT Advisory Committee
- *Previously discussed in Chair report*
- i. Distinguished Lecturer Committee (David Brown)
- *Not present, no report*
- j. Liaison Coordinator (Jeff Johannes)
- *Just got a new liaison for Buffalo*
 - *There are still a lot of schools we don't have liaisons for*
- k. Seaway Current Editor (Elizabeth Wilcox)
- *Current was recently released. Always looking for reports.*
 - *Has purchased stickers and magnets to sell at the meetings. An order for t-shirts has also been submitted. Other items will be available for sale at the spring meeting.*
- l. Webmaster (Cesar Aguilar)
- *No report*

m. Public Information Officer (Christine Uhl)

- No report
- Christine wondered if it would be better to have someone younger (more in tune with social media) who is willing to serve. It was suggested we ask on Saturday.

(5) Old Business

a. Update on bylaws process

- Proposed changes to the bylaws should be included in the next issue of the Current. Section members who are present at the spring business meeting will vote on the proposed changes. From there, it will be sent to a national committee that is looking at section bylaws.
- Brad volunteered to develop an informal document that corresponds with the bylaws to summarize what needs to happen in the section and when.

(6) New Business

- Jeff asked if there was a way to reach out to more people to boost activity in our meetings? Suggestions included sending out a survey to find out why people aren't coming, provide financial help to host institutions, find host institutions that are more centrally located, have faculty apply for travel funds, host joint meetings (cost may actually be more to membership than it currently is due to potential joint meetings being held at hotels rather than on a campus).
- Motion: Give Bob the power, as venues committee chair, after consulting with the executive committee, to offer financial support to host institutions for the next meeting that hasn't been scheduled.
 - Motion passed without dissent. Will be included in business meeting Saturday.

Respectfully submitted,

Jolie Roat (SUNY Cortland)

3. THE BUSINESS MEETING – October 14, 2023

(1) Reports from officers

a. Chair (Leah Bridgers)

- i. We are currently looking for a chair for the Seaway NExT committee. If you or someone you know are interested, let Leah know.

b. Section Representative (Jeff Johannes)

- i. Works on revising National bylaws- mostly bookkeeping in making language more inclusive, more flexibility in positions on executive committee, proposal to extend section rep position from 3 to 4 years.
- ii. MAA website will be updating soon.
- iii. Any questions or concerns?
 - Position used to be “governor” — when attending the national meeting, how was the meeting? Were you able to bring change and feedback? Or were they not interested in our problems or concern? Jeff believes there is progress being made — there were several sessions where they were actively seeking input. In particular, discussions related to Bylaws changes
 - Now that no longer joint with JMM, representatives only meet at MathFest.

c. Treasurer (Gordon Craig)

- i. Only know what major source of revenue is in the spring, so will be giving spreadsheet
- ii. Broke even on Waterloo meeting. Siena meeting cost about \$1000. Will see how this meeting goes.
- iii. Section finances are in good shape. As long as we come close to breaking even on the meetings, we are in good shape.
- iv. Will be trying to get in touch with other sections to see what their fee structures look like.
- v. Still waiting for follow-ups on how subvention from National is actually calculated
- vi. Any questions? NO

d. Program Chair (Cesar Aguilar)

- i. Shared “Program Chair report”
- ii. Next meeting is confirmed for SUNY Fredonia April 19-20, 2024.
 - Don't have speakers lined up yet — contact Gordon or Jeff if have any suggestions.

- iii. Fall 2024 — Gordon Craig looking into York University hosting
 - iv. Still ongoing discussions on holding a joint Spring 2025 meeting with NYSMATYC somewhere in Buffalo area.
 - v. Questions? NO
 - e. Public Information Officer (Christine Uhl)
 - i. We have a Facebook page — anyone can post on it.
 - ii. Thinking about stepping down — someone who is more into social media — if interested, let Christine know.
- (2) Old Business
 - a. Bylaws update
 - i. We've talked with National about what the process is to get it official. Before next meeting we will be sending out an official notice (likely in Current) that we will be voting on our bylaws change at our next business meeting (Spring 2024).
 - ii. These are the changes that we are making to our Bylaws to allow for future unforeseen events that might necessitate changes or flexibility in leadership periods.
- (3) New business
 - a. Venues and affordability
 - i. Executive board had a lot of conversation about venues for meetings.
 - ii. Have discussed what some of the troubles could be (struggling in East and Central NY)
 - iii. One possible could be financial strain to host institution. The resolution that was passed in Friday's Extended Executive meeting was shared.
 - iv. Questions?
 - Agreement that this is a big issue- meeting is all about attendance. If people don't come, the meeting is not a total success. Picking the location and host is the most important thing. Affordability is also important.
 - Multifaceted problem- lots of college budgets have been slashed- if Seaway Section can help, may be helpful.
 - Gordon shared that one thing we are looking at is having it at a more central location which could lower travel and hotel fees.
 - Jeff requested that the membership body vote on the endorsement of the motion
 - A question was asked for clarification on when the next meeting is.
 - Is brought up only when institution expresses interest but is restricted by cost.
 - Have specific criteria been developed? No
 - What could money be used for? Would be used to help for conference expense- local costs incurred.
 - Vote held to endorse: Passed.

Respectfully submitted,
Jolie Roat (SUNY Cortland)