

2025

MOVES

MATHEMATICS OF VARIOUS
ENTERTAINING SUBJECTS



Walk: 30 minutes

Subway: 10 mins **R** train from 28th or 23rd St. to NYU
or **6** train from 28th St. to Astor Place

Uber, Lyft, or cab: 6 minutes

MOVES Conference Schedule of Programs and Activities

Welcome researchers, educators,
and families to the 2025 MOVES Conference,
hosted by the National Museum of Mathematics!

Weekend Morning/Afternoon

Symmetry and the City

A Walk with Chaim Goodman-Strauss

Morning and afternoon tours on Sat. and Sun.
momath.org/walkingtours

pre-registration required

Tin Pan Alley and Beyond

A Musical History Walk with Tim Nissen

Morning and afternoon tours on Sat. and Sun.
momath.org/walkingtours

pre-registration required

Sunday Evening

Open House and Dessert Reception at MoMath

- 6:30** Early check-in begins.
- 6:30** Museum open for conference attendees only;
enjoy more than three dozen unique, hands-on MoMath
exhibits without the crowds!
- 6:45** Dessert reception: Wafels & Dinges.
- 8:45** Reception ends.

Research Track

MoMath is pleased to host a research track with more than 40 talks over the course of the conference.

For the research track, follow the blue listings in the program.

Family Track

MoMath is happy to provide a family track for a broader audience, with 6 presentations and 17 activities.

For the family track, follow the yellow listings in the program.

Monday Morning

Conference Kick-Off and Morning Keynote

Auditorium, NYU Courant

7:45–8:30 Check-in begins.

8:30–8:40 *Welcome and Opening Remarks* — Cindy Lawrence,
Executive Director and CEO, MoMath

8:45–9:45 *Shapes in Math, Origami, and Fashion* — Uyen Nguyen

Room 101

10:10–10:30 *Making Proofs More Visual and Intuitive: the Reflective Properties of Conic Sections, and The Law of Cosines*
Rajeev Raizada, Speyer School

10:35–10:55 *Counting Similar Triangles on a Regular Polygonal Vertex Frame*
Stephen Erfle, Dickinson College

11:00–11:20 *Right Triangles on a Grid*
Saad Mneimneh,
Hunter College of the City
University of New York

11:25–11:45 *The Helen of Geometry and other Fateful Mathematical Shapes*
Suzanne Sumner,
University of Mary Washington

9:50–10:05 Coffee break,
13th floor faculty lounge

Room 102

10:10–10:30 *What Do We Learn From Carroll's Regress?*
Jason Rosenhouse,
James Madison University

10:35–10:55 *Tilt Fonts*
Tomoko Taniguchi,
Japan Advanced Institute of
Science and Technology (JAIST)

11:00–11:20 *Math and Music: from Group Theory to Knot Theory*
Samantha Pezzimenti,
Penn State Brandywine

Auditorium

10:10–10:30 *Slicing the Menger Sponge*
Ethan Berkove,
Lafayette College

10:35–10:55 *Origami Tessellation Design Possibilities from Two Simple Twists*
Madonna Yoder,
Gathering Folds

11:00–11:20 *Folding Gold: Origami-Inspired Jewelry Through Mathematics*
Hridyanshu, University of
California San Diego

11:25–11:45 *Hexa-Hexaflexagon Double Puzzles*
Ann Schwartz,
Fantastic Flexagons

Room 1302

10:10–10:30 *Omnificent Ominoes*
Skona Brittain,
SB Family School

10:35–10:55 *Reinventing Magic Squares: Designing Math Puzzles That Educate by Design*
Christopher Jarvis,
Cinq-Mars Media

11:00–11:20 *Bubble Tiles: Finding a Recreational Math Treasure*
Lauren Siegel,
MathHappens Foundation

Monday Afternoon

12:00–1:30 Lunch: on your own or join conference attendees at La Lanterna di Vittorio (129 MacDougal St.; pre-registration required).

Room 101

1:45–2:05 *Computing Rook Polynomials for Column-Convex Polyominoes*
Max Alekseyev,
George Washington University

2:10–2:30 *On n -Dimensional Subtraction Games*
Mariya Naumova, Rutgers University - New Brunswick

2:55–3:15 *Solving Mapmaker: The Gerrymandering Game using MCMC Redistricting Algorithms*
Madhukara Kekulandara,
University of Rhode Island

3:20–3:40 *Rook in the Menagerie*
Kai Maffucci,
University of Rhode Island

Room 102

1:45–2:05 *Building Better Bones*
Joe Fields, Southern Connecticut State University

2:10–2:30 *Bluffing in Scrabble*
Timothy Chow, Center for Communications Research, Princeton

2:55–3:15 *Coming Soon to MoMath: Programmable Randomness*
Jim Propp, UMass Lowell

2:35–2:50 Coffee break,
13th floor faculty lounge

Auditorium

1:45–2:05 *Max Bill, Mathematician*
Barry Cipra

2:10–2:30 *Rainbow Barricades*
Brian Hopkins,
Saint Peter's University

2:55–3:15 *Escher's Word-Puzzle Designs for Wrapping Paper*
Doris Schattschneider,
Moravian University

3:20–3:40 *Patterns, Shapes, and Structure in Mathematical Poetry*
E.R. Lutken

Family Activity Fair 13th floor faculty lounge

1:45–2:30
Exploring Group Theory and Symmetry Through Coloring Challenges,
Alex Berke, MIT Media Lab

The Geometry of the Game Set,
Matteo Fiori, Saint Ann's School

PENTRAM: The Next-Level of Tangram,
Emil Simeonov, Univ. of Applied Sciences Technikum Wien

Flexagon Fun,
Ann Schwartz, Fantastic Flexagons

2:55–3:40
Islamic Geometric Patterns with Modular Arithmetic: Hands-On Creations and Digital Exploration,
Rebin Muhammad, Montgomery College

The Artistry and Mathematics of Siku Kolam,
Maya Vishnoi and Elisa Celis, Yale

Designing a Mandala,
Nicole Williams, Great Bridge High School

Seeing Math Differently: Artistic Dialogues with Geometry,
Juan Sutachan, Universidad de los Andes

Afternoon Keynote — Auditorium, NYU Courant

3:45–4:45 *Tightly Packed: The Surprising Geometry of Packing Spheres and Other Things* — Thomas Hales,
University of Pittsburgh

Monday Evening

5:00-7:00 Dinner: on your own or with other conference attendees at La Lanterna di Vittorio (129 MacDougal St.; pre-registration required).



Monday Night MOVES

Auditorium, NYU Courant

7:30 to 9:00 PM

Don't miss an evening of math-inspired entertainment!



Stephanie Chou



Mark Mitton



Guitaro 5000

Stephanie Chou is a saxophonist and vocalist whose innovative compositions blend Chinese folk music with jazz and classical influences.

Mark Mitton is a master magician and sleight-of-hand artist known for exploring the intersection of perception, misdirection, and mathematics.

Guitaro 5000 is a guitarist and viral subway performer whose high-energy performances and community singalongs bring people together through rhythm, harmony, and joy.

Tuesday Morning

Morning Keynote — Auditorium, NYU Courant

8:45–9:45 *Look Up! Discovering the Beauty of Math in a World of Digital Distractions* — Alex Berke, MIT Media Lab

Room 101

- 10:10–10:30** *Innovating the Abacus: Expanding Math Accessibility with 3D Printing*
Samuel Foulkes, Clovernook Center for the Blind & Visually Impaired
- 10:35–10:55** *Archimedes's Stomach: a Puzzle You'll Love to Digest*
Yossi Elran, Davidson Institute of Science Education, Weizmann Institute of Science
- 11:00–11:20** *Bounds On The Mosaic Number of Legendrian Knots*
Wing Hong Tony Wong, Kutztown University of Pennsylvania

9:50–10:05 Coffee break,
13th floor faculty lounge

Room 1302

- 10:10–10:30** *Playing with Polygons and Searching for Similarity in Electronic String Art Images*
Steve Erfle, Dickinson College
- 10:35–10:55** *Paper Airplanes: Collecting Data to Find the Best Model*
Laura Kyser Callis, Curry College
- 11:00–11:20** *Gerrymandering Puzzle Challenge*
Madhukara Kekulandara, University of Rhode Island

Auditorium

- 10:10–10:30** *Re-Scrambling Connections*
Puzzles Optimally
Jim Propp, UMass Lowell
- 10:35–10:55** *Daily Day-Weekday Puzzle*
Sy Chen
- 11:00–11:20** *The Math Behind Puzzles and Games*
Rik Sengupta, IBM Research

All MOVES attendees are welcome to enjoy FREE admission to MoMath throughout the conference; please just show your badge in *Additions*, the shop at MoMath, when you arrive.

11:35–1:05 Lunch on your own.

Tuesday Afternoon

1:20-1:40 Collaborative time and free discussion, Rooms 101 and 102

Room 101

- 1:45-2:05** *64=65: A Geometric Vanish Paradox Puzzle Studied by Lewis Carroll*
Stuart Moskowitz, California State Polytechnic University, Humboldt
- 2:10-2:30** *One Equals Zero and Other Mathematical Surprises*
Nitsa Movshovitz-Hadar, Technion - Israel Institute of Technology
- 2:55-3:15** *Mathematics of Gozinta Boxes*
Tanya Khovanova, MIT
- 3:20-3:40** *Crochet, Projective Planes, and Mutually Orthogonal Latin Squares*
Liz McMahon, Lafayette College

2:35-2:50 Coffee break,
13th floor faculty lounge

Auditorium

- 1:45-2:05** *SET: The Last Six Cards*
Gary Gordon, Lafayette College
- 2:10-2:30** *On Some Relatives of the Card Game Set*
Jonathan Lenchner, IBM T.J. Watson Research Center
- 2:55-3:15** *Quad Shapes and Quad Packing*
Lauren Rose, Bard College
- 3:20-3:40** *What's the Best Seat in the Game Left, Center, Right?*
David Richeson, Dickinson College

Room 102

- 1:45-2:05** *The Double Dodecahedron Dissection*
Jeannine Mosely, Akamai
- 2:10-2:30** *Playing Ball in Number Fields*
Hester Graves, IDA / Center for Computing Sciences
- 2:55-3:15** *Cube Compound Puzzles*
George Bell
- 3:20-3:40** *Stacking Shapes for Super Scores*
John Harris, Furman University

Family Activity Fair 13th floor faculty lounge

1:45-2:30

The Mathematics of String Art,
Ena Bahk-Pi

Minimal Surface Bubbles,
Samantha Pezzimenti, Penn State Brandywine

Building Lego Graphs,
Jonathan Needleman, Le Moyne College

Möbiagrams: Wordplay with a Half-Twist,
Bill Gerds

2:55-3:40

Magic Coin Star, Sy Chen

One-Cut Wonders, Heather Clayson,
Orlando Math Circle

From Squares to Wings: Exploring Math with Origami & Kirigami Butterflies,
Silvia Aldana, Math to the Point

Choose-Your-Own-Adventure Origami Tessellation Design,
Madonna Yoder, Gathering Folds

Fold, Cut, and Tile: Discover the Magic of the Einstein Monotile!,
Uttam Grandhi, NYU

Afternoon Keynote and Conference Closing Auditorium, NYU Courant

- 3:45-4:45** *Tilings and Patterns* — Erik Demaine, MIT
- 4:50-5:00** *Concluding Remarks* — Cindy Lawrence,
Executive Director and CEO, MoMath

**The National Museum of Mathematics
thanks the following MOVES supporters:**



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MOVES Conference Committee

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Ron Lancaster, University of Toronto

Jon Lenchner, IBM T.J. Watson Research Center

Tony Nance, The Ohio State University

Jessica K. Sklar, Pacific Lutheran University

Ricardo Teixeira, University of Houston - Victoria

FREE Post-Conference Event

4:00 pm or 7:00 pm, Wednesday, August 13

Category Theory: The Mad Libs of Mathematics

Tai-Danae Bradley

mathencounters.org

Dining Discounts

Show your MOVES badge to receive discounts as shown below.

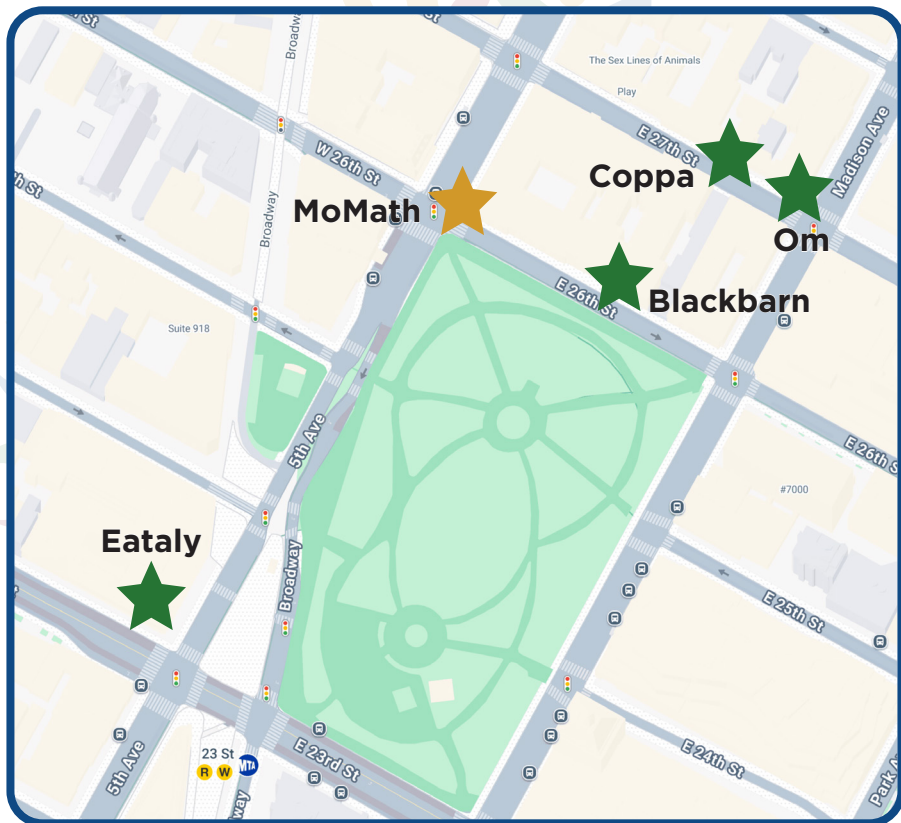
Near MoMath

Blackbarn - 19 East 26th Street - 10% discount

Coppa - 21 East 27th Street - 20% discount

Eataly (La Pizza & La Pasta, Il Pastaio, Il Pesce, SERRA by Birreria, Bar Milano, La Focacceria, La Rosticceria, or Pizza alla Pala) - 200 Fifth Avenue - 10% Discount

Om Juice Bar - 62 Madison Avenue - 10% Discount



Dining Discounts

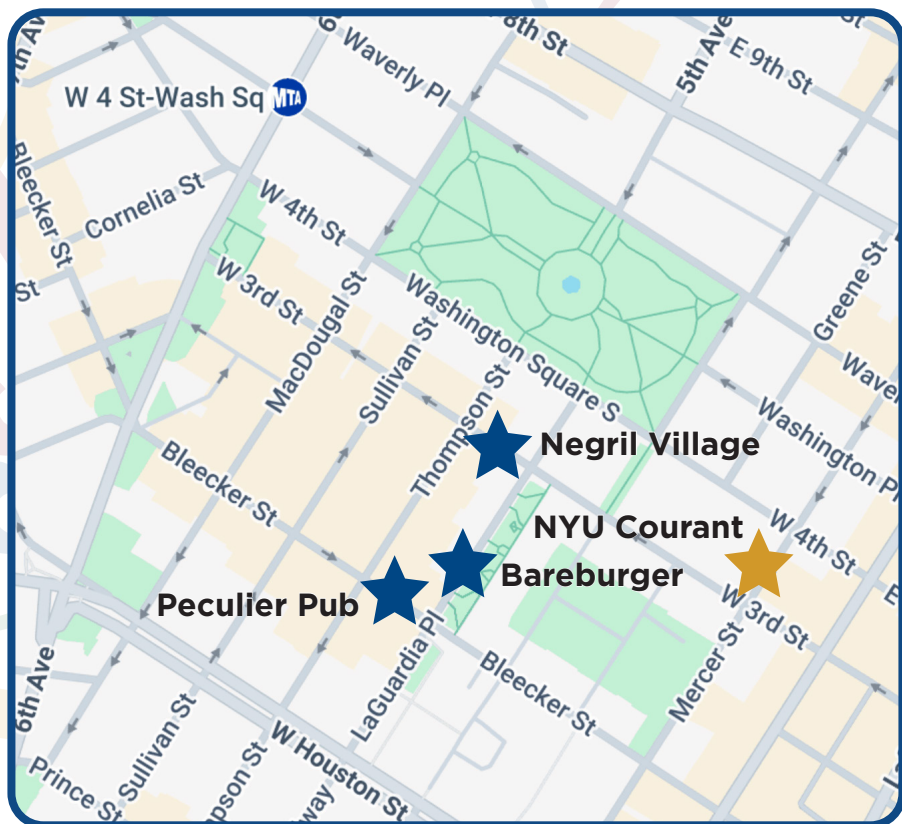
Show your **MOVES** badge to receive discounts as shown below.

Near NYU Courant

Bareburger - 535 LaGuardia Place - Free Smashburger or take advantage of their Serve & Save program (active and retired service workers receive 20% off with valid ID, including educators)

Negril Village - 70 West 3rd Street - \$20 off a bill of \$100 or more (Sunday and Wednesday only)

Peculier Pub - 145 Bleecker Street - Happy Hour pricing all day from August 10 through 12!



Upcoming MoMath Conferences

July 10-12, 2026

**[M A T
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IMAGINARY

momath.org/matrix/matrix-2026

August 8-10, 2027

IMM
MOVES 2027

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moves.momath.org