



**national
math
festival**

Saturday, April 22, 2017

10 am - 7 pm

Washington Convention Center

WASHINGTON, D.C.

nationalmathfestival.org



2017 Festival Organizers



www.msri.org



www.ias.edu



www.momath.org

2017 Festival Sponsors



CHARLES AND LISA
SIMONYI FUND
...FOR ARTS AND SCIENCES...



Gordon and Betty Moore Foundation • The Kavli Foundation • National Science Foundation

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2017 Festival Program Collaborators

American Association
for the Advancement of
Science (AAAS)

American Mathematical
Society (AMS)

Association for Women in
Mathematics (AWM)

Association of Science -
Technology Centers (ASTC)

Bowdoin College

The Bridges Organization

The Computational
Sustainability Network

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Berlekamp Foundation

FIRST®

First 8 Studios™ at WGBH

Gathering 4 Gardner

The George Washington
University

Global Math Project

Illustrative Mathematics

Ithaca College

Julia Robinson
Mathematics Festival

Loyola Marymount University
National Aeronautics and
Space Administration (NASA)

National Association of Math
Circles (NAMC)

The National Center for
Brain Mapping

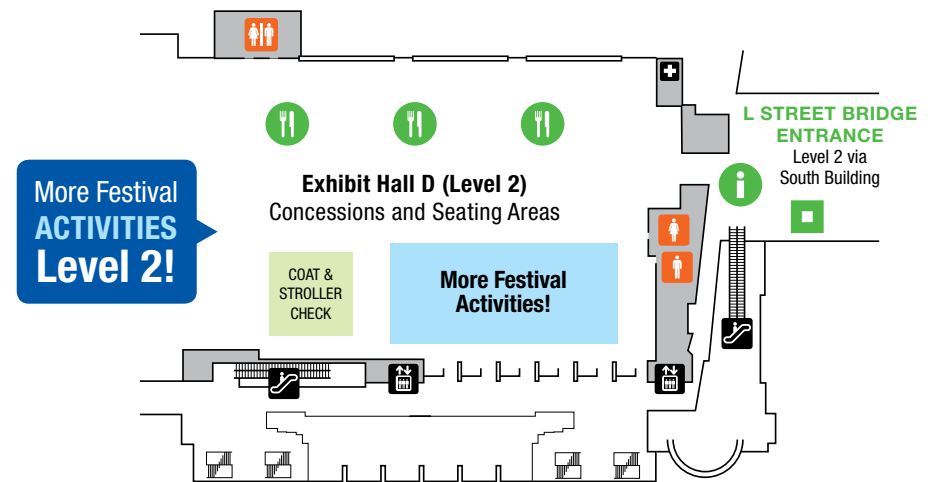
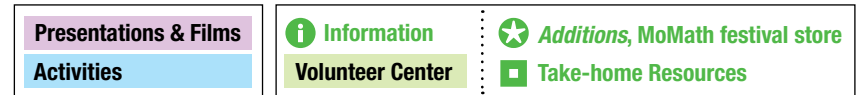
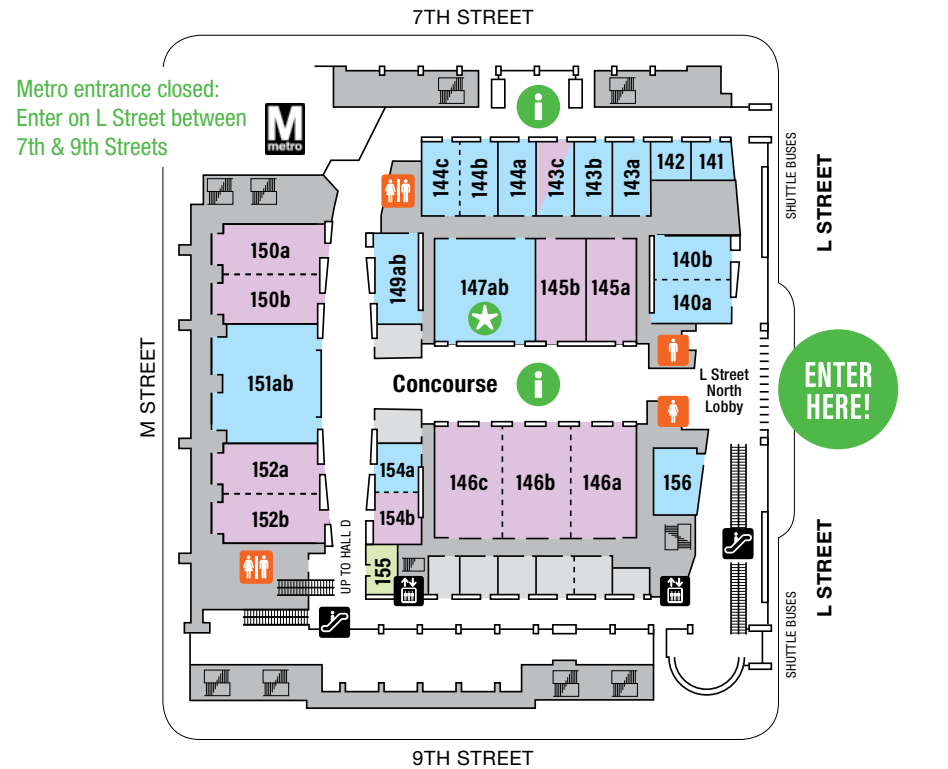
NOVA and NOVA Labs

Numberphile

STATS

ThinkFun

The Young People's Project



All 2017 Festival programs are first come, first served until capacity is reached. Room numbers may be subject to change. For event descriptions and updates, presenter info, and more, download the **NMF 2017** free mobile app for Apple, Android, BlackBerry, and Windows devices.

Activity Presentation



ASL Interpreted

Suggested Age Levels

2-4 5-7 8-10 11-13 14-18 18+

ALL DAY

10:00 AM – 7:00 PM

Wonder-ful Math with MoMath!



Room 147ab

Julia Robinson Mathematics Festival Presents: A Celebration of Mind

Julia Robinson Mathematics Festival Activities:

- Puzzle Making
- Billiard Balls and Laser Beams
- Santorini and Jumping Frogs
- Math for Everyone
- Business Card Tetrahedra

Magic, Math, and Puzzles!

- The Art of Misdirection
- Mathematical Card Magic

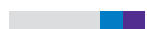
Dots and Boxes Amazons

ThinkFun Games



Room 151ab

Real Science, Real Data, You: Scientific Exploration with NOVA Labs Games



Room 143a

Math-Art Exhibit



Room 143b

What's the Meaning of Life? Find Out...



Room 143a

Dynamic Planets Precipitation Towers What Color is the Ocean?



Room 140ab

Early Math Learning with Technology: Gracie & Friends Apps and Activities



Room 141

Robotics and the Math Connection



Room 140ab

Climate, Math, Ice Cores, and You: Hands-On Data from Planet Earth



Room 156

Geometric Balloon Bending



Concourse

We ♥ Math



Concourse

& ALMOST ALL DAY!

10:00 AM – 4:00 PM

Flagway Games



Room 149ab

Oobleck Olympics



Exhibit Hall D

Hands-on Geometry Festival for All Ages! Presented by the California Math Festival Program



Room 144a

Platonic Paper Folding



Exhibit Hall D

10:00 AM

A Better Story of Math: Calculus for 5-Year-Olds, Grief, and Natural Math Adventures



10:00-11:00, Room 146a

Do Video Games Cause Violence? Exploring the Mind with Statistics



10:00-11:00, Room 150b

The End of Space and Time: The Mathematics of Black Holes and the Big Bang



10:00-11:00, Room 152a

Exploding Dots: A Preview to Global Math Week 2017



10:00-11:00, Room 150a

The Jazz of Physics



10:00-11:00, Room 146c

The Mathematics of the 'Hidden Figures'



10:00-11:00, Room 152b

Numberphile: Brady Haran & Matt Parker



10:00-11:00, Room 145b

A Surreptitious Sequence: The Catalan Numbers



10:00-11:00, Room 154b

Who Wants to Be a Mathematician



11:30-12:30, Room 146b

Cash Prizes for Everyone!



10:00-2:00, Room 144bc

Geometric Sculpture Assembly



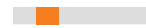
10:00-11:30, Room 154a

Giant SOMA Cube Workshop



10:00-11:00, Room 143c

Math On-A-Stick Sampler



10:00-11:30, Room 142

Zero the Hero: Mask Making Activity



10:00-12:00, Room 141

11:00 AM

Cash Prizes for Everyone!



10:00-2:00, Room 144bc

Math On-A-Stick Sampler



10:00-11:30, Room 142

Zero the Hero: Mask Making Activity



10:00-12:00, Room 14

11:30 AM

Connections and Reconnections: A Link Between Mathematics, Physics, and DNA



11:30-12:30, Room 152a

Creative Math Insights for the Everyday—Sports Edition



11:30-12:30, Room 152b

Do Video Games Cause Violence? Exploring the Mind with Statistics



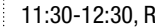
11:30-12:30, Room 146b

How Does Google Do It? The PageRank Algorithm



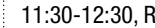
11:30-12:30, Room 150b

The Math of Art and the Art of Math



11:30-12:30, Room 146a

Math, Tipping Points, and Planet Earth



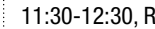
11:30-12:30, Room 150a

Measure, Understand, Control: Zika Virus



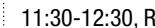
11:30-12:30, Room 146c

Not Your Average Mathematician



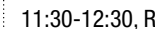
11:30-12:30, Room 154b

Numberphile: Brady Haran & Matt Parker



11:30-12:30, Room 145b

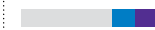
Giant SOMA Cube Workshop



11:30-12:30, Room 143c

12:00 PM

Cash Prizes for Everyone!



10:00-2:00, Room 144bc

Geometric Sculpture Assembly



12:00-1:30, Room 154a

Natural Math: Hands-on Advanced Adventures for the Five and Younger Crowd



12:00-4:00, Room 142

Scavenger Hunt



12:00-2:00, Concourse

12:30 PM

E-Book Math Storytime for Preschoolers



12:30-4:30, Room 141

1:00 PM

2, 4, 6, 8 = Science!



1:00-2:00, Room 152b

Creative Math Insights for the Everyday—Life Edition



1:00-2:00, Room 152a

How to Find Good Math Storybooks



1:00-2:00, Room 154b

Impromptu Magic and Math: Learn Stunts to Dazzle your Friends and Family!



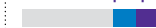
1:00-2:00, Room 146a

The Jazz of Physics



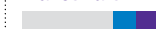
1:00-2:00, Room 150a

Math at Top Speed



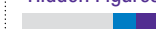
1:00-2:00, Room 146b

Math, Tipping Points, and Planet Earth



1:00-2:00, Room 150b

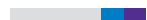
The Mathematics of the 'Hidden Figures'



1:00-2:00, Room 146c

1:00 PM (continued)

Numberphile: Brady Haran & Cliff Stoll



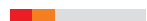
1:00-2:00, Room 145b

Cash Prizes for Everyone!



10:00-2:00, Room 144bc

E-Book Math Storytime for Preschoolers



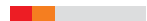
12:30-4:30, Room 141

Giant SOMA Cube Workshop



1:00-2:00, Room 143c

Natural Math: Hands-on Advanced Adventures for the Five and Younger Crowd



12:00-4:00, Room 142

Scavenger Hunt



12:00-2:00, Concourse

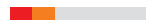
2:00 PM

Curator's Tour—Math Art Exhibit



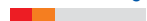
2:00-2:30, Room 143b

E-Book Math Storytime for Preschoolers



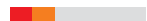
12:30-4:30, Room 141

Natural Math: Hands-on Advanced Adventures for the Five and Younger Crowd



12:00-4:00, Room 142

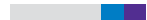
Natural Math Play Date



2:00-2:45, Room 154a

2:30 PM

The End of Space and Time: The Mathematics of Black Holes and the Big Bang



2:30-3:30, Room 146c

Exploding Dots: A Preview to Global Math Week 2017



2:30-3:30, Room 146b

Great Vision from Crummy Optics: How Do Your Eyes Do It?



2:30-3:30, Room 152a

How Does Google Do It? The PageRank Algorithm



2:30-3:30, Room 146a

How to Bake Pi: Math Made Tasty



2:30-3:30, Room 152b

Patterns + Women = Figures in Mathematics



2:30-3:30, Room 154b

Peace Comes to the Unusual Kingdoms: An Outstanding Mathematical Musical for Children



2:30-3:30, Room 150a

Which One Doesn't Belong? And Other Ambiguous Math Questions



2:30-3:30, Room 145b

When Will I Ever Use This: How Scientists Use Math to Model and Understand Hurricane Storm Surges



2:30-3:30, Room 150b

Math Cheer Clinic



2:30-4:30, Room 144bc

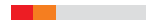
Giant SOMA Cube Workshop



2:30-3:30, Room 143c

3:00 PM

E-Book Math Storytime for Preschoolers



12:30-4:30, Room 141

Math Cheer Clinic



2:30-4:30, Exhibit Hall D

A Mathematical Art Tour



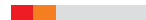
3:00-3:45, Concourse

Natural Math: Hands-on Advanced Adventures for the Five and Younger Crowd



12:00-4:00, Room 142

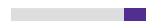
Natural Math Play Date



3:00-3:45, Room 154a

4:00 PM

Bedtime Math and Beyond!



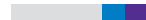
4:00-5:00, Room 145b

Connections and Reconnections: A Link Between Mathematics, Physics, and DNA



4:00-5:00, Room 146a

Creative Math Insights for the Everyday—Sports Edition



4:00-5:00, Room 150a

How to Bake Pi: Math Made Tasty



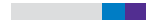
4:00-5:00, Room 146c

Impromptu Magic and Math: Learn Stunts to Dazzle your Friends & Family!



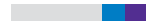
4:00-5:00, Room 152b

Matt Parker: Stand-Up Mathematician



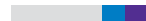
4:00-5:00, Room 152a

Measure, Understand, Control: Zika Virus Disease



4:00-5:00, Room 150b

Meet Brady Haran of Numberphile



4:00-7:00, Exhibit Hall D

Moebius Loops and Klein Bottles, Oh My!



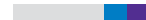
4:00-4:45, Room 143c

Patterns + Women = Figures in Mathematics



4:00-5:00, Room 154b

Math: Charting NASA's Journey in Space



4:00-5:00, Room 146b

E-Book Math Storytime for Preschoolers



12:30-4:30, Room 141

Math Cheer Clinic



2:30-4:30, Exhibit Hall D

A Mathematical Art Tour



4:00-4:45, Concourse

Natural Math Play Date



4:00-4:45, Room 154a

4:30 PM

Curator's Tour—Math Art Exhibit



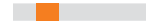
4:30-5:00, Room 143b

Math Dice Tournament



4:30-7:00, Exhibit Hall D

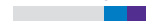
Math On-A-Stick Sampler



4:30-7:00, Room 142

5:00 PM

Meet Brady Haran of Numberphile



4:00-7:00, Exhibit Hall D

Moebius Loops and Klein Bottles, Oh My!



5:00-5:45, Room 143c

Cash Prizes for Everyone!



5:00-7:00, Room 144bc

Flagway Tournament



5:00-7:00, Room 149ab

Math Cheer Clinic



4:30-7:00, Exhibit Hall D

Math Dice Tournament



5:00-7:00, Exhibit Hall D

Math On-A-Stick Sampler



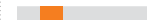
4:30-7:00, Room 142

Sudoku and Beyond: Create Your Own Mathematical Puzzles



5:00-5:45, Room 144a

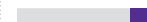
Zero the Hero: Mask Making Activity



5:00-7:00, Room 141

5:30 PM

Bedtime Math and Beyond!



4:00-5:00, Room 145b

Great Vision from Crummy Optics: How Do Your Eyes Do It?



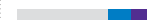
5:30-6:30, Room 146a

Making Math Visible



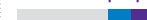
5:30-6:30, Room 154b

Math and the Holonomic Drive: The Pursuit of a Smooth Ride



5:30-6:30, Room 154a

Math at Top Speed



5:30-6:30, Room 150a

Math: Charting NASA's Journey in Space



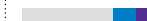
5:30-6:30, Room 152a

The Math of Art and the Art of Math



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Matt Parker: Stand-Up Mathematician



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Peace Comes to the Unusual Kingdoms: An Outstanding Mathematical Musical for Children



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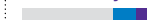
When Will I Ever Use This: How Scientists Use Math to Model and Understand Hurricane Storm Surges



2:30-3:30, Room 150b

6:00 PM

Meet Brady Haran of Numberphile



4:00-7:00, Exhibit Hall D

Moebius Loops and Klein Bottles, Oh My!



6:00-6:45, Room 143c

Cash Prizes for Everyone!



5:00-7:00, Room 144bc

Flagway Tournament



5:00-7:00, Room 149ab

Math Cheer Clinic



5:00-7:00, Exhibit Hall D

Math Dice Tournament



4:30-7:00, Exhibit Hall D

Math On-A-Stick Sampler



4:30-7:00, Room 142

Sudoku and Beyond: Create Your Own Mathematical Puzzles



6:00-6:45, Room 144a

Zero the Hero: Mask Making Activity



5:00-7:00, Room 141

FILMS

Room 145a | Suggested age level for most films is 11+

10:00-11:00 **Navajo Math Circles** (59 min.)
11:05-12:00 **The Origami Revolution** (54 min.)
12:05-2:25 **Hidden Figures** (127 min.)
2:30-2:45 **Skylab** (13 min.)
2:50-3:00 **The Collector's Gift** (9 min.)
3:05-3:25 **Chasing Patterns** (17 min.)
3:30-4:05 **Haber** (34 min.)

4:10-4:35 **The Monster and the Peanut** (23 min.)
4:40-4:50 **The Collector's Gift** (9 min.)
4:55-5:15 **Chasing Patterns** (17 min.)
5:20-5:40 **The King's Pawn** (18 min.)
5:45-5:55 **The Collector's Gift** (9 min.)
6:00-7:00 **Navajo Math Circles** (59 min.)

Take the National Math Festival home with you!

2017 Presentation Videos

nationalmathfestival.org/2017-festival

Online Events

Create your own Personal Polynomial... pose a stumper on Reddit to your favorite mathematicians... and more fun year-round. Join us!

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More Math!

Fun for the whole family, from books to games to videos to puzzles!

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Stay in touch year-round for mathy news, resources, and more!

nationalmathfestival.org

National Association of Math Circles

Find one near you: after-school, recreational math for all ages and ability levels.

mathcircles.org

Mathical Books

PreK-12 literary works chosen by educators, librarians, and mathematicians.

mathicalbooks.org



We are grateful to our **Key Math Allies**, who join us in promoting awareness of mathematics through public programming, including the **American Mathematical Society** (AMS), the **Association for Women in Mathematics** (AWM), the **Mathematical Association of America** (MAA), the **National Association of Mathematicians** (NAM), the **Society for Advancement of Chicanos/Hispanics and Native Americans in Science** (SACNAS), and the **Society for Industrial and Applied Mathematics** (SIAM).

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