



# FESTIVAL SCHEDULE AND MAP

SATURDAY, APRIL 18, 2015  
10 AM-4 PM

Organized by:



with

**Smithsonian Museums**



For additional event details, visit [www.MathFest.org](http://www.MathFest.org). Real-time updates will be tweeted by @mathmoves

We want to hear about your experience! Join the conversation online using #MathFest2015.

All National Math Festival venues are accessible to persons with disabilities. For more information or to request services, call (877) 573-4457 or visit the Festival Information Center in Haupt Garden.


# National Math Festival Schedule at a Glance

Saturday, April 18, 2015. 10am–4pm

See reverse side for map corresponding to event numbers.

## ALL DAY EVENTS (10AM–4PM)

**1 MoMath's Math Midway!**  
National Museum of Mathematics  
Smithsonian's Haupt Garden  
All ages

**2 Cash Prizes for Everyone!**  
Guerrilla Science  
Smithsonian's Haupt Garden  
Ages 14+ 

**3 Doblek Olympics**  
Guerrilla Science  
Smithsonian's Haupt Garden  
Ages 14+

**4 Escape from DC**  
Guerrilla Science  
Smithsonian's Haupt Garden  
Ages 14+

**5 MoSAIC Art Exhibition**  
The Bridges Organization  
Smithsonian's Ripley Center, Room 3031  
Ages 11+

**6 Mathematical Balloon Twisting**  
The Bridges Organization  
Smithsonian's Ripley Center, Concourse  
All ages

**7 Geometric Origami**  
The Bridges Organization  
Smithsonian's Ripley Center, Concourse  
All ages

**8 Celebration of Mind: Mathematical Games, Magic and Puzzles**  
Elwyn & Jennifer Berlekamp Foundation  
Smithsonian's Ripley Center, Discovery Theater  
All ages

**9 The Hyperbolic Star**  
Zometool  
Smithsonian's Ripley Center, Concourse  
All ages

**10 Self-Guided Solar System Tour**  
Dr. Jeffrey Goldstein  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 8+

**11 Math on the National Mall: Self-Guided Tour**  
Mathematical Association of America  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 11+

**12 Bones: A Forensic Math Mystery**  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+

**13 Discovery Stations**  
Smithsonian's Air and Space Museum  
Ages 8+

**14 Patterns + Women = Figures in Mathematics**  
Dr. Alissa Crans  
Smithsonian's Ripley Center, Room 3035  
Ages 11–18 10 am–10:45 am

**15 Math at Top Speed**  
Dr. Richard Tapia  
Smithsonian's Ripley Center, Room 3037a  
Ages 14+ 10 am–10:45 am

**16 Cosmic Shadows and the Fifth Dimension**  
Dr. Arlie Petters  
Smithsonian's Ripley Center, Room 3037b  
Ages 14+ 10 am–10:45 am

**17 Black Girls CODE**  
Kimberly Bryant  
Smithsonian's Ripley Center, Lecture Hall  
Ages 14+ 10 am–10:45 am 

**18 Maya Math Activity**  
Wilma Ortiz-Sanchez  
Smithsonian's Ripley Center, Discovery Theater  
Ages 11+ 10 am–12 pm ■

**19 Early Math Learning with Technology: Gracie & Friends Apps and Activities**  
First 8 Studios at WGBH  
Smithsonian's American History Museum, Smithsonian's Early Enrichment Center  
Ages 2–7 10 am–12 pm ■

**20 Sort, Organize, Count, Categorize: Collect!**  
Betsy Bowers  
Smithsonian's American History Museum, Smithsonian's Early Enrichment Center  
Ages 2–4 10 am–12 pm ■


**21 Science Snippets: Wind Tunnel**  
Smithsonian's Air and Space Museum, Barron Hilton Pioneers of Flight Gallery (208)  
Ages 2–7 10 am–10:45 am

**22 Math in the Garden: Build Your Own Parterre**  
Cindy Brown  
Smithsonian's Haupt Garden  
Ages 8+ 11 am–1 pm ■

**23 Supply Chains, or, How Much TP Do We Really Need?**  
Smithsonian Office of Facilities Management and Reliability  
Smithsonian's Haupt Garden  
Ages 8+ 11 am–1 pm ■

**24 MoSAIC Art Exhibition—Curator's Tour**  
The Bridges Organization  
Smithsonian's Ripley Center, Room 3031  
Ages 11+ 11 am–11:30 am

**25 Patterns + Women = Figures in Mathematics**  
Dr. Alissa Crans  
Smithsonian's Ripley Center, Room 3035  
Ages 11–18 11 am–11:45 am

**26 How Not to Be Wrong**  
Dr. Jordan Ellenberg  
Smithsonian's Ripley Center, Room 3037a  
Ages 11+ 11 am–11:45 am 

**27 Archimedes: Mathematical Superhero of the Ancient World**  
Dr. Matthew Kahle  
Smithsonian's Ripley Center, Room 3037b  
Ages 14+ 11 am–11:45 am

**28 Who Wants to Be a Mathematician**  
American Mathematical Society  
Smithsonian's Ripley Center, Lecture Hall  
Ages 14+ 11 am–11:45 am

**29 Calculating America's Front Lawn**  
Anne Sequeira  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 11+ 11 am–11:45 am

**30 Guided Solar System Tour**  
Dr. Jeffrey Goldstein  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 8+ 11 am–11:45 am

**31 The Math and Science of Getting in Sync**  
Dr. Steven Strogatz  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 14+ 11 am–11:45 am

**32 Q?Crew Youth Volunteer Social Media Broadcast**  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 11 am–3 pm ■■■

**33 Geometric Patterns in Islamic Art**  
Carol Bier  
Smithsonian's Freer and Sackler Galleries, s1 lobby  
Ages 8+ 11 am–11:45 am

**34 What's in Your Gourd? Using Gourds to Teach Math: Patterns, Shapes, Sizes and Forms!**  
Deborah Stokes  
Smithsonian's African Art Museum, Pavilion, 1st Level  
Ages 5+ 11 am–2 pm ■■

**35 Flights of Fancy Story Time**  
Smithsonian's Air and Space Museum, Space Race Gallery (114)  
Ages 2–7 11 am–11:45 am

**36 MoSAIC Art Exhibition—Curator's Tour**  
The Bridges Organization  
Smithsonian's Ripley Center, Room 3031  
Ages 11+ 12 pm–12:30 pm 

**37 Math Circles: Mathematical Explorations**  
National Association of Math Circles  
Smithsonian's Ripley Center, Room 3035  
Ages 11+ 12 pm–12:45 pm

**38 Black Girls CODE**  
Kimberly Bryant  
Smithsonian's Ripley Center, Room 3037a  
Ages 14+ 12 pm–12:45 pm

**39 Knots and DNA**  
Dr. Mariel Vazquez  
Smithsonian's Ripley Center, Room 3037b  
Ages 14+ 12 pm–12:45 pm

**40 Mathical Book Signing**  
Smithsonian's Ripley Center, Concourse  
All ages 12 pm–1:30 pm ■

**41 Using Math to Construct a Psychedelic Video of my 1970 Chevelle Show Car**  
Dr. Richard Tapia  
Smithsonian's Ripley Center, Lecture Hall  
Ages 14+ 12 pm–12:45 pm

**42 Math on the National Mall: Intro to Self-Guided Tour**  
Mathematical Association of America  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 11+ 12 pm–12:45 pm

**43 Modeling the Melt: What Math Tells Us about the Disappearing Polar Ice Caps**  
Dr. Kenneth Golden  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 14+ 12 pm–12:45 pm

**44 Diamond or Deception**  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 12 pm–3 pm ■■

**45 Expert is In: The Math Behind Volcanic Eruptions**  
Dr. Benjamin Andrews  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 12 pm–3 pm ■■

**46 Expert is In: New Seaweed, New Homes?**  
Dr. Courtney Gerstenmaier  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 12 pm–3 pm ■■

**47 Expert is In: Skeleton in Motion**  
Dr. Habiba Chirchir  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 12 pm–3 pm ■■

**48 Real Science, Real Data, You: Scientific Exploration with NOVA Labs Games**  
NOVA Labs  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 12 pm–3 pm ■■

**49 Space Racers**  
Smithsonian's Air and Space Museum, Barron Hilton Pioneers of Flight Gallery (208)  
Ages 2–7 12 pm–12:45 pm

**50 Telescope Viewing** (Weather Permitting)  
Smithsonian's Air and Space Museum, Phoebe Waterman Haas Public Observatory  
Ages 11+ 12 pm–3 pm ■■

**51 Very Small Sea Creatures**  
Dr. Mimi Koehl  
Smithsonian's Ripley Center, Room 3035  
Ages 14+ 1 pm–1:45 pm

**52 How Not to Be Wrong**  
Dr. Jordan Ellenberg  
Smithsonian's Ripley Center, Room 3037a  
Ages 11+ 1 pm–1:45 pm

**53 Rubik's Cube and Other Permutation Puzzles**  
Dr. Matthew Kahle  
Smithsonian's Ripley Center, Room 3037b  
Ages 18+ 1 pm–1:45 pm

**54 A Voyage That Will Forever Change Your Perspective of Home**  
Dr. Jeffrey Goldstein  
Smithsonian's Ripley Center, Lecture Hall  
Ages 11+ 1 pm–1:45 pm

**55 The Math Behind Minecraft**  
Joel Levin  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 1 pm–1:45 pm

**56 Geometric Patterns in Islamic Art**  
Carol Bier  
Smithsonian's Freer and Sackler Galleries, s1 lobby  
Ages 8+ 1 pm–1:45 pm


**57 Math in the Garden: Measuring Water Drip by Drip**  
Michael Guetig  
Smithsonian's Haupt Garden  
Ages 8+ 2 pm–4 pm ■

**58 Smart Machines Behind the Scenes**  
Smithsonian Office of Facilities Management and Reliability  
Smithsonian's Haupt Garden  
Ages 8+ 2 pm–4 pm ■

**59 Doing Math in Public**  
Dr. Steven Strogatz  
Smithsonian's Ripley Center, Room 3035  
Ages 14+ 2 pm–2:45 pm

**60 A Surreptitious Sequence: The Catalan Numbers**  
Dr. Alissa Crans  
Smithsonian's Ripley Center, Room 3037a  
Ages 14+ 2 pm–2:45 pm


**61 Math Circles: Mathematical Explorations**  
National Association of Math Circles  
Smithsonian's Ripley Center, Room 3037b  
Ages 11+ 2 pm–2:45 pm

**62 Cosmic Shadows and the Fifth Dimension**  
Dr. Arlie Petters  
Smithsonian's Ripley Center, Lecture Hall  
Ages 14+ 2 pm–2:45 pm 

**63 Math on the National Mall: Intro to Self-Guided Tour**  
Mathematical Association of America  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 11+ 2 pm–2:45 pm

**64 Modeling the Melt: What Math Tells Us about the Disappearing Polar Ice Caps**  
Dr. Kenneth Golden  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 14+ 2 pm–2:45 pm

**65 Design a Kolam**  
Shanathi Chandrasekar  
Smithsonian's Freer and Sackler Galleries, Sackler sublevel 2, ImaginAsia Classroom  
Ages 8–13 2 pm–4 pm ■

**66 Very Small Sea Creatures**  
Dr. Mimi Koehl  
Smithsonian's Ripley Center, Room 3035  
Ages 14+ 3 pm–3:45 pm 

**67 The Fair Lane Assignment Problem in BMX Bicycle Racing**  
Dr. Richard Tapia  
Smithsonian's Ripley Center, Room 3037a  
Ages 14+ 3 pm–3:45 pm

**68 Math is Cool!**  
Dr. George Hart  
Smithsonian's Ripley Center, Room 3037b  
Ages 14+ 3 pm–3:45 pm

**69 Knots and DNA**  
Dr. Mariel Vazquez  
Smithsonian's Ripley Center, Lecture Hall  
Ages 14+ 3 pm–3:45 pm

**70 Guided Solar System Tour**  
Dr. Jeffrey Goldstein  
Smithsonian's Ripley Center, Math on the Mall Meeting Place  
Ages 8+ 3 pm–3:45 pm

**71 The Math Behind Minecraft**  
Joel Levin  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm

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Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm

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Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm

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Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm

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Joel Levin  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm

**87 The Math Behind Minecraft**  
Joel Levin  
Smithsonian's Natural History Museum, Q?rius Education Center  
Ages 11+ 3 pm–3:45 pm



For more details about each session, please visit [www.MathFest.org](http://www.MathFest.org).

Welcome to the National Math Festival! Today's celebration features **40+ free activities for every age**, scattered throughout several Smithsonian museums.

Learn how fireflies stay in sync, and how drag racers stay on the track. Ride on a Square-Wheeled Tricycle. Shoot smoke rings like William Tell. Learn the math behind Minecraft. Immerse yourself in games, magic, art, and more! The National Math Festival is organized by the Mathematical Sciences Research Institute (MSRI) and the Institute for Advanced Study (IAS) in cooperation with the Smithsonian Institution.

**FESTIVAL SPONSORS:**  
Carnegie Corporation of New York, Google, Howard Hughes Medical Institute, Simons Foundation, Charles and Lisa Simonyi Fund for Arts and Sciences, Alfred P. Sloan Foundation, The Kavli Foundation, Gordon and Betty Moore Foundation, Research Corporation for Science Advancement, and IBM.

**PROGRAM PARTNERS:**  
Elwyn & Jennifer Berlekamp Foundation, National Museum of Mathematics (MoMath), and NOVA.

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