# Interested in Mathematical Outreach?

*Stop by the NAMC / SIGMAA-MCST Booth and learn about quick and fun outreach activities!*

| Thursday 10:00 am - Noon | Friday 10:00 am - Noon | Friday 2:00 pm – 4:00 pm | Saturday 10:00 am - Noon |
|---|---|---|---|
| **Stomp Rockets** | **Four Square Problem** | **Mathematical Tiling** | **Criss-Cross** |

# Discover Math Circles!

**https://www.mathcircles.org/content/mathfest-2016**

# Math Circle Events at MathFest 2016

**Wednesday, August 3**
6:00 pm - 8:00 pm: Grand Opening Exhibit Hall Reception (Exhibit Hall)

**Thursday, August 4**
9:00 am - 5:00 pm: Visit the NAMC Booth (Exhibit Hall)
1:00 pm - 5:45 pm: SIGMAA-MCST Contributed Paper Session:
    My Favorite Math Circle Problem (Franklin C)
6:00 pm - 8:00 pm: NAMC Math Circle Happy Hour (Location TBA)

**Friday, August 5**
9:00 - 5:00 pm: Visit the NAMC Booth (Exhibit Hall)

**Saturday, August 6**
9:00 am - 12:00 pm: Visit the NAMC Booth (Exhibit Hall)
1:00 pm - 1:50 pm: Special Presentation for High School Students, Parents, and
    Teachers: The Astounding Mathematics of Bicycle Tracks (Hayes)
2:00 pm - 3:30 pm: SIGMAA-MCST Math Teachers' Circle Demo (Morrow)
4:00 pm - 5:30 pm: Math Wrangle (Morrow)

**MSRI**
National Association of MATH CIRCLES
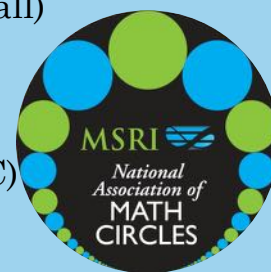
## For additional Math Circle resources visit these websites:

* National Association of Math Circles (NAMC): http://mathcircles.org
* NAMC on Facebook: http://www.facebook.com/MathCircles
* SIGMAA-MCST: http://sigmaa.maa.org/mcst
* Math Teachers' Circle (MTC) Network: http://mathteacherscircle.org

**Want to try out different mathematical outreach activities and talk to Math Circle leaders about their experiences?  Visit the Math Circle booth, jointly hosted by the National Association of Math Circles (NAMC) and the Mathematical Association of America's Special Interest Group on Math Circles for Students and Teachers (/SIGMAA-MCST).**

## 10:00 am - Noon.    Thursday, August 4, 2016

### Stomp Rockets
Stomp rockets are great for STEM outreach events. Students construct rockets out of construction paper and then hypothesize which rocket will go the highest. Using mathematics the students work together to calculate the height of their rocket flights.
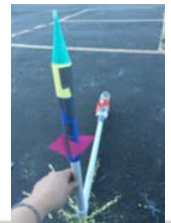
## 1:00 pm - 5:45 pm.  Thursday, August 4, 2016 (Franklin C)

### SIGMAA-MCST Contributed Paper Session
**My Favorite Math Circle Problem**  - see inside pages for more details

Thursday 6:00 – 8:00 pm
Join us for the **NAMC Math Circle Happy Hour** – Location TBA.

## 10:00 am - Noon.    Friday, August 5, 2016

### Four Square Problem
This problem provides students practice in basic arithmetic (subtraction) in the context of a problem-solving challenge.  The students repeat subtraction over and over again and the more they engage in the game the harder subtraction problems they will assign to themselves.

## 2:00 pm - 4:00 pm.  Friday, August 5, 2016

### Mathematical Tiling
Tiling allows us to mathematize the world around us, providing game play with classroom tile floors or kitchen counters. Challenge activities can be provided for students who understand the basic game and are ready to take it to the next step.

## 10:00 am  - Noon.   Saturday, August 6, 2016

### Criss-Cross
Criss-Cross is a game presented by S. Vandervelde in his *Circle in a Box* book. The game is approachable by students of various backgrounds and easily modified in difficulty depending on students' interests.

For more information about these activities visit
**https://www.mathcircles.org/content/quick-activities-mathematical-outreach-events**

# SIGMAA-MCST Contributed Paper Session
# My Favorite Math Circle Problem

**Thursday,
August 4th
1:00 – 5:00 pm**
Location:
Franklin C

A Math Circle is an enrichment activity for K-12 students or their teachers, which brings them into direct contact with mathematically sophisticated leaders, fostering a passion and excitement for deep mathematics in the participants. Math Circles combine significant discovery and excitement about mathematics through problem solving and exploration. Talks in this session will address a favorite problem or topic that was successful with a Math Circle audience.

**Organizers:**
**Katherine Morrison,** *University of Northern Colorado*
**Philip Yasskin,** *Texas A&M University*
See abstracts online, https://www.mathcircles.org/content/mathfest-2016

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|---|---|
| 1:00 – 1:15 pm | Tiling with Pentagons |
| | Judith Covington, *LSU Shreveport* |
| 1:20 – 1:35 pm | The Check is in the Mail |
| | Mary Garner, *Kennesaw State University* |
| | Virginia Watson, *Kennesaw State University* |
| 1:40 – 1:55 pm | Measuring Up: Perfect Rulers |
| | Chris Bolognese, *Columbus Academy* |
| | Raj Shah, *Math Plus Academy* |
| 2:00 – 2:15 pm | First Survey of National Association of Math Circles |
| | Diana White, *University of Colorado Denver* |
| | Brandy Wiegers, *Central Washington University* |
| 2:20 – 2:35 pm | Group Discussion |
| 2:40 – 2:55 pm | Using Tools to Communicate in Math Teachers' Circle |
| | Sandra Richardson, *National Science Foundation* |
| 3:00 – 3:15 pm | Making Infinitely Many Mistakes Deliberately – Iteration |
| | Robert Sachs, *George Mason University* |
| 3:20 – 3:35 pm | Fractals: Theory, Application – and Business Cards? |
| | Douglas Meade, *University of South Carolina* |

# SIGMAA-MCST Contributed Paper Session
# My Favorite Math Circle Problem (cont'd)

3:40 – 3:55 pm   <u>Stimulating math curriculum for students from challenging socio-economic backgrounds</u>
Alessandra Pantano, *University of California, Irvine*

4:00 – 4:15 pm   <u>Visualize the Two Conjugate Complex Roots for Quadratic Equations</u>
Li Feng, *Albany State University*
Janis T. Carthon, *Albany State University*
Courtney L. Brown, *Albany State University*

4:20 – 4:35 pm   <u>Projective Geometry Hidden Inside: Can you Spot it!?</u>
Thomas Clark, *Dordt College*

4:40 – 4:55 pm   <u>The Mathematics of Shidoku</u>
Crystal Lorch, *Ball State University*
John Lorch, *Ball State University*

5:00 – 5:15 pm   <u>Pirate Zombie Math</u>
Angie Hodge, *University of Nebraska Omaha*

5:15 – 5:45 pm   <u>AIM MTC-Net and MSRI NAMC Discussion</u>

6:00 – 8:00 pm   <u>Happy Hour, hosted by NAMC</u>. Location TBA

# Join us for these additional SIGMAA-MCST events on Saturday, August 6th

1:00 – 1:50 pm
*Hayes*
<u>Special Presentation for High School Students, Parents and Teachers: *The Astounding Mathematics of Bicycle Tracks*</u>
James Tanton, *Ambassador for the Mathematical Association of America.*

2:00 – 3:30 pm
*Morrow*
<u>Math Teachers' Circle Demonstration</u>
Amanda Serenevy, *Riverbend Community Math Center*
Bob Klein, *Ohio University*

4:00 – 5:30 pm
*Morrow*
<u>Math Wrangle</u>
Mark Saul, *American Math Competitions*
Ed Keppelmann, *University of Nevada*

**More details at https://www.mathcircles.org/content/mathfest-2016**