



*Math Students' Circles* and *Math Teachers' Circles* bring K-12 students or K-12 mathematics teachers together with mathematically sophisticated leaders in informal settings. Meetings are held after school, on weekends, or during summers to work on interesting problems or topics in mathematics. Math Circles combine significant content with an interactive setting that encourages a sense of discovery and excitement about mathematics through problem solving and exploration. Ideal problems are low-threshold, high-ceiling; they offer a variety of entry points and can be approached with minimal mathematical background, but lead to deep mathematical concepts and can be connected to advanced mathematics.

## Discover Math Circles!



There are several National Programs that support Math Circles

### AMS/MSRI Math Circles Library

A collection of great books for Math Circle organizers including wonderful problem collections, discussions of experiences in math teaching, and practical books.

<https://www.ams.org/bookstore/>



### Math Circle Funding

The National Association of Math Circles and Math Teachers' Circles both provide funding for novice and continuing Circle leaders to sustain and grow Math Circle programs.



### Workshops/ Training Programs

If you are a novice Math Circle leader there are many resources to get you started including NAMC, MTC and SIGMAA-MCST workshops and session at the national meetings. Visit online to learn more.



### For additional Math Circle Resources...

- \* National Association of Math Circles: <http://www.mathcircles.org/>
- \* SIGMAA-MCST: <http://sigmaa.maa.org/mcst>
- \* Math Teachers' Circle (MTC) Network: <http://mathteacherscircle.org>

<https://www.mathcircles.org/content/joint-math-meetings-2016>

## Activities of Interest to Math Circles at JMM 2016

See online for more details, <https://www.mathcircles.org/content/joint-math-meetings-2016>

### Wednesday January 6, 2016

- **9:30 a.m. - 10:25 a.m.** MAA General Contributed Paper Session on Outreach. Room 618, Washington State Convention Center
- **6:30 p.m. - 7:50 p.m.** AMS/ MAA Special Film Presentation- *Navajo Math Circles* Come see the movie & meet students and teachers from the Navajo Math Circle! Ballroom 6BC, Washington State Convention Center

### Thursday January 7, 2016

- **8:00 a.m. - 11:55 a.m.** MAA Session on The Broad Impact of Math Circles Organized by SIGMAA-MCST Room 303, Washington State Convention Center
- **10:00 a.m. - 12:00 p.m.** MAA Poster Session: *Mathematical Outreach Programs* Hall 4F, 4th Floor, Washington State Convention Center
- **1:00p.m. - 4:10 p.m.** SIAM Minisymposium on *K-8 Applied Mathematics Outreach* Room 3A, Washington State Convention Center
- **2:00 p.m. - 4:00 p.m.** MAA Poster Session on *Projects Supported by the NSF DUE* Hall 4F, 4th Floor, Washington State Convention Center

### Friday, January 8, 2016

- **2:30 p.m. - 3:30 p.m.** SIGMAA MCST Business Meeting Location TBA - will be announced via email to SIGMAA-MCST listserv
- **5:00 p.m. - 7:00 p.m.** National Association of Math Circles Happy Hour Location TBA on Facebook/ email - visit [mathcircles.org](http://mathcircles.org) to learn more.

### Saturday, January 9, 2016

- **8:00 a.m. - 8:50 a.m.** MAA Special Presentation for HS Teachers and Students James Tanton Presents- *How to Think Brilliantly and Creatively in Mathematics, A Guide for K-12 Educators and Their Students.* Room 612, Washington State Convention Center
- **9:15 a.m. - 10:45 a.m.** MAA Special Presentation for HS Teachers and Students: James Tanton Presents: *High School Quadratics: How to Think About and Do Everything About Them Brilliantly and Creatively.* Room 612, Washington State Convention Center
- **11:00 a.m. - 11:50 a.m.** SIGMAA MCST Math Circle Demonstration Zvezdelina Stankova Mills College and Berkeley Math Circle Room, 612, Washington State Convention Center
- **1:00 p.m. - 2:30 p.m.** SIGMAA MCST Math Wrangle Room 612, Washington State Convention Center

**SIGMAA-MCST Special Session**<http://sigmaa.maa.org/mcst/>**Broad Impact of Math Circles****THURSDAY JANUARY 8<sup>th</sup>**

8:00 -11:55 am, Room 303, Convention Center



- 8:00 a.m. – 8:20 a.m.  
**The benefits of running a Math Circle with college students for middle school students.**  
Amy Wangsness Wehe\*, Fitchburg State University
- 8:20 a.m. – 8:40 a.m.  
**From 5th to 12th: Discoveries and Challenges of Multi-leveled Math Circles.**  
Kaitlyn Phillipson\*, Texas A&M University  
Frank Sottile, Texas A&M University  
Alex Sprintson, Texas A&M University  
Philip B. Yasskin, Texas A&M University
- 8:40 a.m. – 9:00 a.m.  
**Building a Network: The North Carolina Network of Math Teachers' Circles.**  
Sloan Evans Despeaux\*, Western Carolina University.
- 9:00 a.m. - 9:20 a.m.  
**Developing Mathematics Teachers' Mathematical Problem solving Through a Math Teachers' Circle Framework**  
Patrice Waller\*, Virginia State University  
Sandra Richardson, Virginia State University.
- 9:20 a.m. - 9:40 a.m.  
**UCI Math CEO: The ripple effect of the UCI Community Educational Outreach.**  
Alessandra Pantano\*, University of California, Irvine

- 9:40 a.m. - 10:00 a.m.  
**Kittitas Valley Math Circle, a program for students and their parents.**  
Brandy S Wieggers, Central Washington Univ, National Association of Math Circles  
Dominic Klyve, Central Washington University  
Allyson Rogan-Klyve, Central Washington University, Oregon State University  
Janet Shiver, Central Washington University.
- 10:00 a.m. - 10:20 a.m.  
**In Their Own Words: Teachers Reflect on their MTC Experiences.**  
Michelle A Manes\*, University of Hawaii at Manoa
- 10:20 a.m. - 10:40 a.m.  
**The Broad Impact of Math Teachers' Circles: Results from the First Decade.**  
Brianna Donaldson\*, American Institute of Mathematics
- 10:40 a.m. - 11:00 a.m.  
**Students' perceptions for an impact of Math and Logic enrichment program.**  
Victoria Kofman, Stella Academy  
Aleksandra Fedorov\*, Stella Academy  
Ryan Marchenko, Stella Academy  
Ethan Soifer, Stella Academy, Buffalo Grove IL.
- 11:00 a.m. - 11:20 a.m.  
**Mentoring Students and Supporting Teachers: New Programs from the Navajo Nation Math Circles Project.**  
Bob Klein\*, Ohio University Department of Mathematics  
Rebecca Bycofski, Ohio University Department of Mathematics  
Henry Fowler, Diné College Department of Mathematics.
- 11:20 a.m. - 11:40 a.m.  
**A Math Student Circle in rural Wisconsin**  
Richard P Spindler\*, University of Wisconsin - Eau Claire
- 11:40 a.m.- Noon  
**A discussion session hosted by the National Association of Math Circles and the Math Teachers' Circle Network.**