

**JMM 2023**

**SIGMAA on Math Circles for Students and Teachers**

*(SIGMAA-MCST)*

**Resources and News for Math Circle Leaders**

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<th>Math Circle Network</th>
<th><a href="https://mathcircles.org/">https://mathcircles.org/</a></th>
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<td>Math Circle Special Interest Group</td>
<td><a href="http://sigmaa.maa.org/mcst/">http://sigmaa.maa.org/mcst/</a> session resources will be shared here</td>
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<td>of the MAA, Website</td>
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<td>Journal of Math Circles</td>
<td><a href="https://digitalcommons.cwu.edu/mathcirclesjournal">https://digitalcommons.cwu.edu/mathcirclesjournal</a></td>
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**Math Circle Related Events at JMM 2023**

- **Wednesday January 4, 8:30am-12:00pm**
  - **AMS-SIGMAA MCST Special Session**: *Math Circle Activities as a Gateway into Mathematics I*, Room 109, Hynes Convention Center (See details below)
  - Organizers: Lauren Rose, Bard College, Brandy Wiegers, Central Wash Univ, Gabriella Pinter, Univ of Wisconsin, Milwaukee, Nick Rauh, Julia Robinson Math Festivals

- **Wednesday January 4, 1pm - 5:30pm**
  - **AMS-SIGMAA MCST Special Session**: *Math Circle Activities as a Gateway into Mathematics II*, Room 109, Hynes Convention Center (See details below)

- **Thursday January 5, 8:30am-12:00pm**
  - **AMS-SIGMAA MCST Special Session**: *Math Circle Activities as a Gateway into Mathematics III*
  - Room 109, Hynes Convention Center (See details below)

- **Thursday January 5, 8:00 p.m.-9:30 p.m.**
  - **AIM Math Circles Reception**
  - Salon JK, Marriott Copley Place
  - Organizers: Brianna Donaldson, American Institute of Mathematics

- **Friday January 6, 2:00 p.m.-3:30 p.m.**
  - Learn About Math Festivals with JRMF
  - Commonwealth, Sheraton Boston Hotel
  - Organizers: Daniel Kline, Julia Robinson Mathematics Festival

- **Saturday January 7, 9:00 a.m.-12:00 p.m.**
  - Julia Robinson Math Festival
  - Hall C, Hynes Convention Center
  - Organizers: Daniel Kline, Julia Robinson Mathematics Festival

**AMS-SIGMAA MCST Special Session**: *Math Circle Activities as a Gateway into Mathematics I, II, III*: Room 109, Hynes Convention Center

**Detailed Schedule:**
Wed January 4, 2023, 8:30 a.m.-12:00 p.m.

8:30 a.m: Can we fix it? Adventures into structural stability
Istvan G Lauko, Gabriella A. Pinter*, University of Wisconsin, Milwaukee

9:00 a.m: Fighting for Independence with 0,+1, and -1
Edward Charles Keppelmann*, University of Nevada Reno

9:30 a.m: Exploring prime numbers and the abc conjecture
David Patrick*, Art of Problem Solving

10:00: Break, get to know one another

10:30 a.m: Dividing Space: First Day Activity for Math Camp and for Linear Algebra (and other courses)
Teresa D Magnus*, Rivier University, Nashua NH

11:00 a.m: Prolonging the pendulum: an additive activity
Michael D. Barrus*, University of Rhode Island

11:30 a.m: Finding patterns in visual problems: Examples from Graph Theory
Moshe Cohen*, State University of New York At New Paltz

Wed January 4, 2023, 1:00 p.m - 5:30 pm

1:00 p.m: Let's have fun! Mathematical games for math circles
Rachel Stahl*, Bridgewater State University

1:30 p.m: Tiling a Chessboard: A Problem Adapted for the Virtual Math Circle
Christina Duron*, Pepperdine University, John Peca-Medlin, University of Arizona

2:00 p.m: Pennies on a Chessboard
Jeffrey Musyt*, Slippery Rock University

2:30 p.m: Solution to Instant Insanity
Michele Gribben*, McDaniel College
(1183-10-22320)

3:00 p.m: Quads: A SET-like game with a twist
Lauren L. Rose*, Bard College

3:30pm: Break, get to know one another

4:00 p.m: Fair is Fair, As Long As It's Not Too Unfair: The Apportionment Problem
Jeff Suzuki*, Brooklyn College

4:30 p.m: Using the Journal of Math Circles
Brandy S. Wiegers*, Central Washington University

5:00 p.m: Impacts of presentation of higher-level mathematics topics to freshman students with hands-on activities with an emphasis on topology
Bartu Bingol*, University of Massachusetts Amherst, Dr. Melodi Ozyaprak, No affiliation.
Thursday January 5, 2023, 8:30 a.m.-12:00 p.m.

8:30 a.m: Clock Buddies: An Engaging, Open-Ended Group Scheduling Activity  
Debra K Borkovitz*, Boston University

9:00 a.m: Engaging Children from Around the World in Mathematics using Magic Squares  
Tifen Marie Calcagni*, Global Math Circle, Campo Elias Suarez, CIRCOAP

9:30 a.m: Activities for Virtual Classroom Visits  
Nick Rauh*, Julia Robinson Math Festivals

10:00 am: Break, get to know one another

10:30 a.m: Symmetry, Surfaces, and Knots: Geometry Activities for Middle School Students in Math Circles  
Marco Aldi, Christine L. Bae, Bailey Bontrager, Allison H Moore, Visala Rani Satyam*, Nicola Tarasca, Virginia Commonwealth University

11:00 a.m: Just Don’t Tell Them What It Is - On Teaching Abstract Algebra to Middle School Math Circle Students  
Sheila K. Miller Edwards*, University of New Mexico, Taos

11:30 a.m: Modeling complex behavior from simple rules: Cellular automata for Math Circles  
Mark Hughes*, Brigham Young University