Special Interest Group of the MAA on Mathematics and the Arts

Σ · ARTS

NEWSLETTER

Buzjani's Rusty Compass Pentagon Reza Sarhangi and Robert Fathauer JMM 2008

MAY 2018   **Issue 3**

EVENTS

Mathématiques & Art - ESMA
March 12-23, 2018 Paris, France

M.C. Escher +
April 13-June 9, 2018 DIFFERENT *TRAINS Gallery* Decatur, Georgia

The Intersetion of Art + Math
April 26 - June 2, 2018 *Schack Art Center* Everett, Washington

Leonardo 50 en México - ISAST
April 19, 2018 *Universidad Autnoma Metropolitana*, Mexico City, Mexico

Show your Work: Art and Math
June 14, 2017-May 20, 2018 *San Jose Museum of Art* San Jose, California

BRIDGES STOCKHOLM 2018
July 25-29, 2018 *Tekniska Museet* Stockholm, Sweden

MAA MathFest 2018
Aug 1-4, 2018 Denver, Colorado

IMAGINARY Conference 2018
Dec 5-8, 2018 Montevideo, Uruguay

MOMATH Events
National Museum of Mathematics Manhattan, New York

Symmetry Festival 2019 - International Symmetry Association
July 24-28, 2019 *Center for Art and Media* Karlsruhe, Germany

Message from the Officers

Our aim with the Newsletter is to provide another conduit for communication with our members. We're always looking for help running SIGMAA-ARTS, in particular organizing talks at meetings, overseeing the finances, and organizing a logo contest. No experience is necessary, just a willingness to try something new. If you are interested, please contact Doug Dunham at ddunham@d.umn.edu

NEWS

### Report from JMM 2018

The Joint Math Meetings this year were held at the San Diego Convention center. With geometric figures built into its architecture and a view of the water, it was a beautiful place for SIGMAA-ARTS annual art exhibit and math & arts talks. The sessions, under the heading Arts and Mathematics: The Interface, were offered on Wednesday, Friday, and Saturday. Doug Norton did a particularly excellent job of scheduling talks with common themes, which helped speakers and attendees start conversations about shared interests. The first day had ideas from non-euclidean geometry, music, quilting, and education. The second day saw dance, patterns in different cultures, fun and hands-on 3d printing excursions, origami and iterative art. The last day had new investigations in textile arts and complex ideas using technology. While the food in the convention center was unfortunately both bad and expensive, a wide variety of restaurants were available within walking distance for fun lunch meetings and nights out. The annual Knitting Circle was a great meeting of minds and hands where people brought the projects they were working on and had a relaxing, enjoyable, and thought-provoking evening together.

The art exhibit was full of great conversations this year. Many artists stood by their work and explained their ideas, techniques, and new directions for the future. I think this helped more people understand the mathematical depth of this beautiful exhibit. We had several first-timers exhibiting at this show, which was great to see, including a winner of one of the art exhibition awards David Honda, who made a massive, blue, dodecahedral torus with origami to win the Best textile, sculpture, or other medium category. The award for Best photograph, painting, or print went to Frank Farris for his elegant designs using a Fibonacci spiral and gooseberries, and "Excentrica" by Ekaterina Lukasheva received the Honorable Mention for an expertly executed origami tessellation. We saw the math-art community come together at this conference to make a great show, with artists helping one another fix stuff that was damaged in the mail, mini-lessons and demonstrations, spontaneous sculptures being built nearby, and discussions between new and old friends.

In the near future, SIGMAA-ARTS is hoping to make a banner to hang up at the art exhibit so more people will know the hard work that we put in to make the art exhibit happen. During the SIGMAA-ARTS meeting, there was talk of making the logo contest happen this year and a call for new blood to help keep SIGMAA-ARTS going. Keep an eye out for announcements for these opportunities.

This conference had rivers of people walking through hallways banked by tables to sit and chat, we could see the influence of the arts growing with math-art topics in the Mathemati-Con Events, and with more people knitting, wearing mathematical patterns and objects, and attending SIGMAA-ARTS talks . Thanks for all of your excellent contributions, and we're all looking forward to what you come up with next!
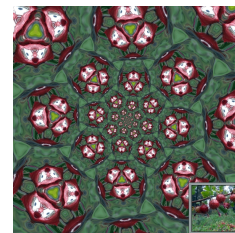
Gooseberry/Fibonacci Spiral - Frank Farris
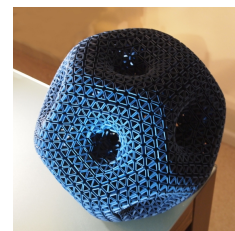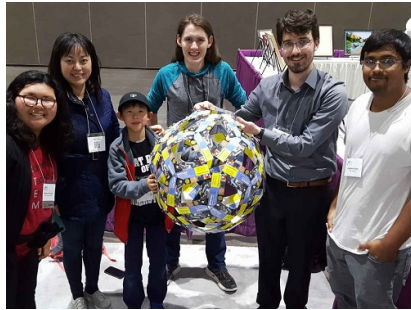

Dodecahedral 11-Hole Torus - David Honda

Excentrica - Ekaterina Lukasheva

ANNOUNCEMENTS

New poetry collection *Ode to Numbers* (Antrim House, 2017) by Sarah Glaz (University of Connecticut)


David Reimann (Albion College) led a fun building activity during the JMM near the art exhibition.

Sarah Marie's classic holiday apple pie, crust design inspired by Lauren Ko (December 2017).

Rosanna Iembo, mathematician, poet and Sigmaa-Art member has got the Honorable Mention of the well-deserving citizens by the Municipality of Crotone (Italy), the city of Pythagoras.
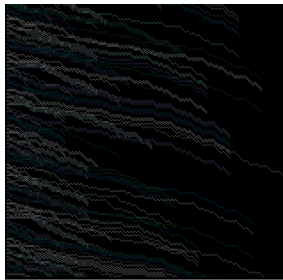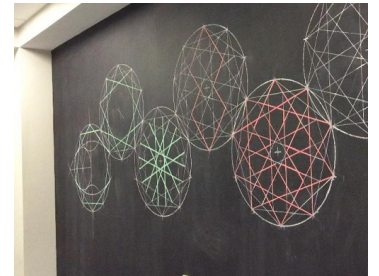

Collatz Parity Sequences, or Lightning in the Hailstone Numbers (Matthew Cliatt, Google)
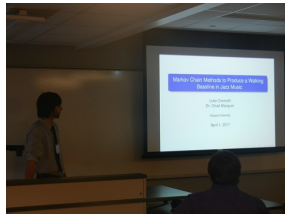
Undergrad research on Markov chains in jazz music; Dr. Chad Mangum of Niagara University.

Frank Farris in the math art show of the MAA Golden Section at CSU, East Bay, coordinated by Shirley Yap and Vince Matsko

Compass-and-straightedge construction of medieval Islamic design, Preston Nichols, Shawnee St. Univ.

Rhombus Non-Symmetric Penrose Tile Quilt. Donna A. Dietz 2015

A physical model of a helicoid in hyperbolic space, by Roice Nelson, www.roice3.org.
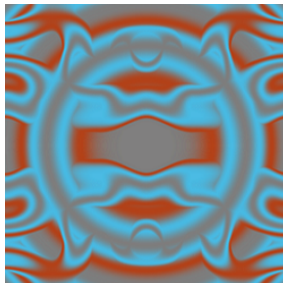

60 dodecahedra made from cardboard representing all 60 different rotational symmetries of the dodecahedron (smallest nontrivial finite simple group). Christoph Poeppe

Conference attendees peruse the art exhibit at the IN-IL-MI Trisection Meeting, Valparaiso U.

Temari Permutation Ball. Debra K. Borkovitz, Wheelock College, Boston, MA. http://debraborkovitz.com

The Cayley table of a random operation on [-1,1]. John W. Snow, The University of Mary Hardin-Baylor

Everyone in math 106 of fall 2017 designed and made final Math and Art project, see the article Bringing math concepts to life through quilting Simei Tong, UWEC

"Euclidean Geometry" by R Anderson, student, for an independent study with D Hydorn at UMW.

A new textbook draft *Mathematics in Artistic Design: Bringing projects to life* by Bingen, Cashman, Hanson, & Tong.

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