# Special Interest Group of the MAA on Mathematics and the Arts



DahPar I Reza Sarhangi JMM 2012

JUNE 2017

### UPCOMING EVENTS

BRIDGES WATERLOO 2017 July 27-31, 2017 University of Waterloo, Ontario, Canada

MAA MathFest 2017 July 26-29, 2017 Chicago, Illinois

**IMAGINARY Exhibits, Workshops, & Math Creations Contest** Spring and Summer 2017, Europe

Joint Math Meetings 2018 Jan 10-13, 2018 San Diego, California

#### Message from the Officers

Welcome to the second edition of the SIGMAA-ARTS Newsletter. As mentioned in the first edition, our aim is to provide another conduit for communication with our members. We plan to include math-arts related news and announcements. If you have anything to report or other suggestions, please contact us.

We're looking for help revising the SIGMAA-ARTS charter. The problem is that the charter calls for yearly elections, but since organizing and hosting talks and exhibits take time, skill, and experience, it isn't feasible to change officers every year even if there were willing volunteers. In fact, we need some kind of structure for training replacements. We're having trouble finding time to work on this with our other responsibilities and it is important to the MAA. Contact Doug Dunham at ddunham@d.umn.edu to help out, no experience neccessary.

This newsletter was designed by Teresa Downard and edited by Mary Margaret Williamson.

SIGMAA-Arts

<u>NEWS</u>

#### Report from JMM 2017

The Joint Mathematics Meetings (JMM 2017) convened in Atlanta this year. The mathart community was active, from the 38 talks in four sessions of the MAA Contributed Paper Session on Mathematics and the Arts (1)(2)(3)(4), to the Exhibition of Mathematical Art, with 112 works by 72 artists. It was the first JMM since the passing of Reza Sarhangi (1952-2016), our friend, founder of the Bridges Organization, and tireless advocate for mathematical art.

Doug Dunham (University of Minnesota-Duluth) and John Shier won the prize for Best Photograph, Painting, or Print with their color print "Fractal Monarchs." The winner for Best Textile, Sculpture, or Other Medium was Jiangmei Wu (Indiana University) with her "Torus," which is folded from a single sheet of paper. Mary Klotz (Frederick, MD) won Honorable Mention with "AABB, two juxtapositions: Stars and Tadpoles, Dots and Triceratops," a triaxial weaving from handdyed silk ribbon. See the online gallery for images of all the pieces on display.

The area in the exhibition hall reserved for the art show (organized by Robert Fathauer) was in a visible location, and many conference-goers stopped by to have a look. The art space became a center of activity on Thursday afternoon when David Reimann (Albion College) led the SIGMAA-ARTSsponsored "barn-raising" project. Reimann, with the help of many hands, including a lively contingent of young mathematicians, assembled a massive polyhedron from plywood squares, machine screws, and nuts.

The SIGMAA-ARTS business meeting took place on Wednesday, which for the first time was preceded by "substantial hors d'oeuvres." There was also an MAA special presentation Poetry+Math on Thursday evening. Many of the crafters in the mathart crowd attended the Knitting Circle also on Thursday.



Barnraising sculpture with David Reimann

Website: http://sigmaa.maa.org/arts/

The contributed paper sessions were organized (and moderated) by Doug Norton (Villanova), and they were well-attended. Doug Dunham presented the algorithm behind his award-winning print, and Simei Tong (University of Wisconsin-Eau Claire) shared her amazing mathematical quilts. Jennifer Wilson (The New School) gave a talk on Sol LeWitt, and James Henle (Smith College) proposed a definition of what a mathart object is, prompting some interesting discussion. Luke Wolcott (USC) recounted an interesting collaborative project which involved hiking up the Himalaya and measuring altitude by means of the boiling point of water, the list of fascinating presentations goes on. JMM 2018 will happen in San Diego, where another

lively program of events for the mathart crowd is expected. See you there!

Submitted by Karl Kattchee (University of Wisconsin-La Crosse)



Issue 2

NEWSLETTER

MAA

Fractal Monarchs Dunham & Shier



Torus - Jiangmei Wu



AABB - Mary Klotz

## ANNOUNCEMENTS



The first art exhibit at a MAA Sectional Meeting was hosted by the Golden Section on March 4th, 2017 at Santa Clara University in California! You can find more pictures and information on Vince Matsko's Blog "Creativity in Mathematics".



The 2017 Southeastern Section meeting at Mercer University featured two mathematical art events: the first special session on math and art at a section meeting as well as one of the first math and art shows, titled "Adjacent", which ran from Feb-ruary 27-March 24 in the Plunkett Gallery. Both were organized/co-organized by Carolyn Yackel.



"Visualizing Mathematics with 3D Printing" was published by Johns Hopkins University Press in July 2016.

PROJECTIVE GEOMETRY APPLIED TO PERSPECTIVE ART

The draft of our book is available at https://www. fandm.edu/annalisa-crannell/ course-materials/ perspective-math-for-majors.



comprehensivebook designed to appeal  $_{\rm to}$ students without specialized knowledge mathematics of or or ... music. Johns nor kins University Press frommusictomath.com/



ing hyperbolic surfaces to the UW-La Crosse Crochet Coral Reef (see http://www.theiff.org/ for more information).



MathStudio, featured Atela in Artists Favourites section of German/English contemporary art magazine Spike Art Quarterly, Winter 2017.



randomness and how (as in Conways Game of Life) a small set of simple rules can produce unexpected com-plexity. This acrylic paint-ing was developed from a square grid on the canvas exercise left to the viewer! -Rich Kaste



University of Wisconsin Eau Claire students enjoys design and making math and art course project. Dr. Simei Tong is very proud of her students creation and she is very grateful of the department and local community support in this effort.



Laura Moss using Daina Taimina's crochet models to teach young students about hyperbolic geometry in Huntsville, AL. mosslj@uah.edu



Compound of 30 icosahedra, meeting edge to edge with overall icosahedral symmetry, made from cardboard the traditional way (score, cut & glue), coloured to look like a bouquet of flowers for Valentines day-Christoph P'oppe

M





JMM 2017: Rosanna Iembo, mathe-Atlanta. matician and Sigmaa-Arts member, together with the daughters Miriam and Irene Iaccarino, vio-linists, presented a video on the harmony of the Pythagorean School, founded in Crotone, Italy.



Fun with modular origami - with branching ratios larger



Nick Mendler have been work-ing on fractal binary trees David Redman (photo by Myung than one, and will be pre-Pinner) senting their work at Bridges 2017.

IG



Distribution  $\mathbf{of}$ Equidistant Primes - Mauricio A. Lara

A



Tree  $_{\rm of}$ Life McGinnis Florida State College

R



Exploring the hidden symmetries of the multiplication table through Cynthia modular arithmetic by Zoheir Northwest Barka, Journal of Humanistic Mathematics.