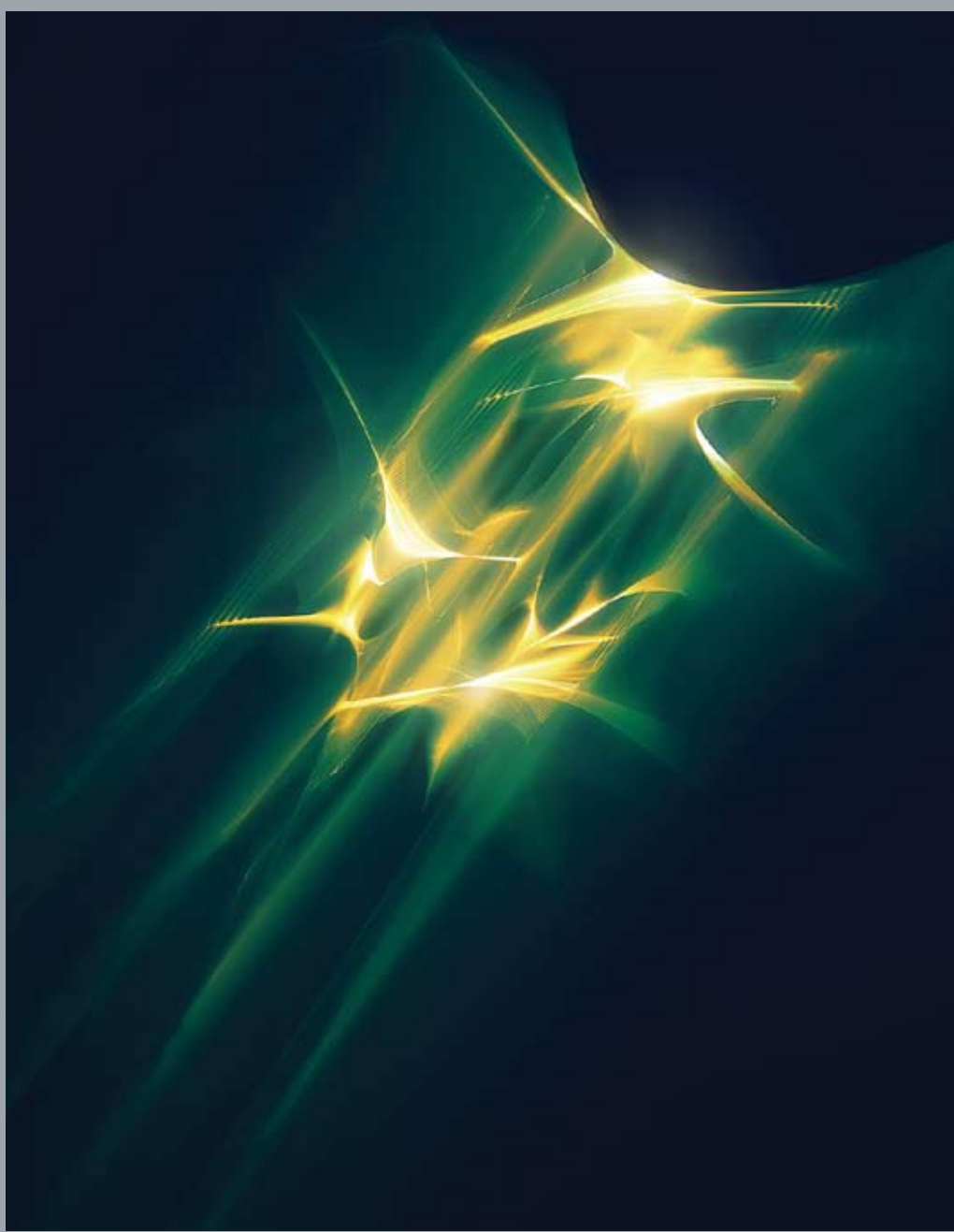


THE AMERICAN MATHEMATICAL SOCIETY

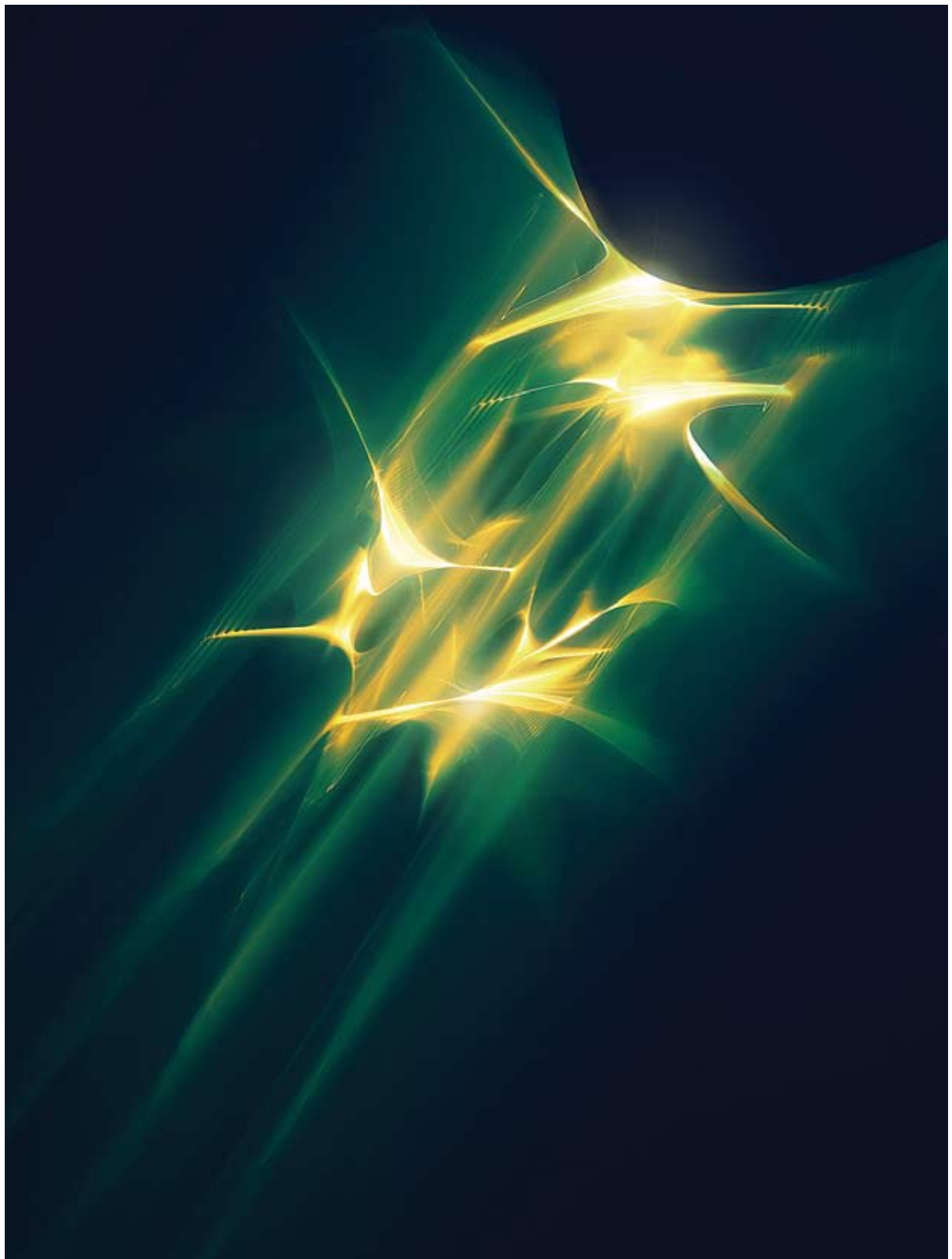
2009

Calendar of  
Mathematical  
Imagery



"SA\_1188415571," by Nathan Selikoff (see *January 2009*)

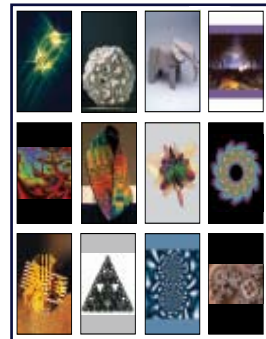




“SA\_1188415571,” by Nathan Selikoff

This three-dimensional strange attractor is reminiscent of Hubble images of the Eagle Nebula, though it is a purely mathematical construct. See more images at [www.nathanselikoff.com/](http://www.nathanselikoff.com/).

—Nathan Selikoff

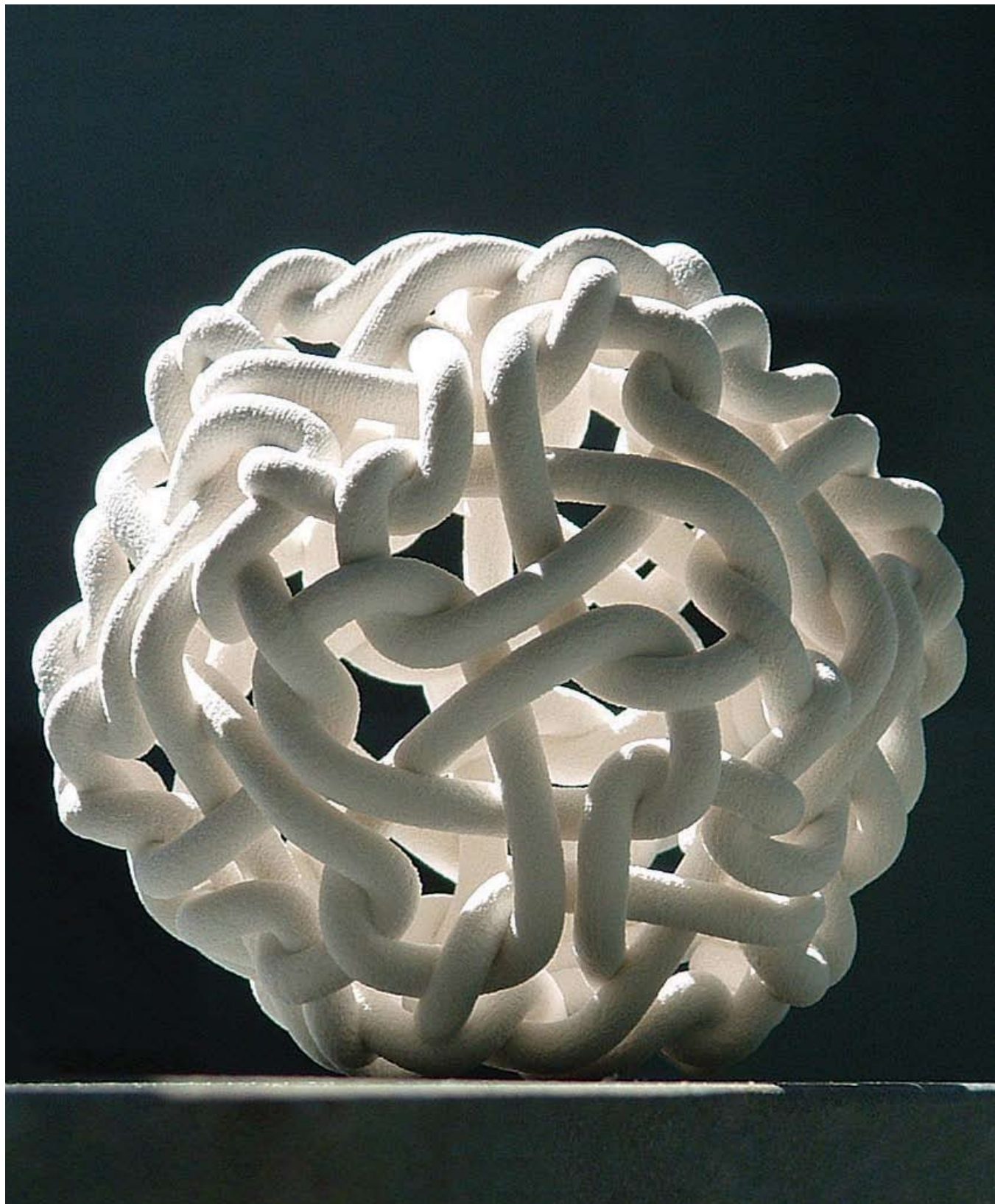


**THIS MATHEMATICAL MONTH**

Monthly postings of vignettes on people, publications, and mathematics to inform and entertain. Navigate through the year starting at [www.ams.org/ams/thismathmonth-jan.html](http://www.ams.org/ams/thismathmonth-jan.html).

# JANUARY 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<b>Joint Mathematics Meetings</b> 5–8: Joint Mathematics Meetings, Washington, DC				1	2	3
				New Year's Day		
4	5	6	7	8	9	10
Isaac Newton (1643)	Joint Mathematics Meetings, Washington, DC	Joint Mathematics Meetings, Washington, DC	Joint Mathematics Meetings, Washington, DC	Joint Mathematics Meetings, Washington, DC		
11	12	13	14	15	16	17
18	19	20	21	22	23	24
Martin Luther King, Jr. Day (U.S.)				David Hilbert (1862)		
25	26	27	28	29	30	31
Joseph Louis Lagrange (1736)						



“Arabic Icosahedron,” by Carlo Séquin, University of California, Berkeley

Moorish patterns found in the Alhambra often depict lattices of interlocking knots. Here such a pattern composed of interlocking trefoil knots has been wrapped around an icosahedron. Each of the 20 faces is replaced with a trefoil knot, which interlocks along the triangle edges with three adjacent trefoils. The exact nature of the linking between adjacent trefoils leaves some freedom to the designer: In the simplest case two adjacent trefoils interlock with just one lobe each. In the “Arabic Icosahedron” they are linked with two lobes each, resulting in a much tighter meshing.

—Carlo Séquin



**HEADLINES & DEADLINES FOR STUDENTS** provides email notification of

mathematics news and upcoming deadlines. The emails are issued about once a month and when there's special news. Imminent deadlines will be included in these emails, which will link to a webpage that's a centralized source for information relevant to students and faculty advisors at [www.ams.org/news-for-students/](http://www.ams.org/news-for-students/). The HEADLINES & DEADLINES members-only service emails news, programs, prizewinners, and events, as well as deadlines for fellowship and grant applications, calls for proposals, and meeting registrations, at [www.ams.org/enews](http://www.ams.org/enews).

# FEBRUARY 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
	Presidents' Day (U.S.)					
22	23	24	25	26	27	28



“African Elephant, opus 322,” by Robert J. Lang  
**Medium:** One uncut square of watercolor paper, composed and folded in 1996, 8”  
 Image courtesy of Robert J. Lang. Photograph by Robert J. Lang.

The intersections between origami, mathematics, and science occur at many levels and include many fields of the latter. Origami, like music, also permits both composition and performance as expressions of the art. Over the past thirty-five years, I have developed over 480 original origami compositions. About a quarter of these have been published with folding instructions, which, in origami, serve the same purpose that a musical score does: it provides a guide to the performer (in origami, the folder) while allowing the performer to express his or her own personality through interpretation and variation.

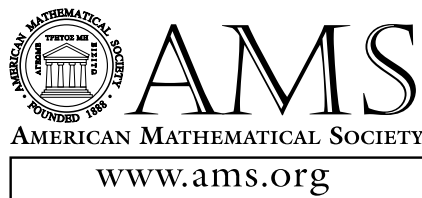
—Robert J. Lang



Readers may choose to view the entire issue of NOTICES OF THE AMS in pdf—page-by-page as one would browse the print issue—or navigate from the *Notices* homepage (current issue) to any section or page. Also new, readers can email the feature articles to colleagues and link directly from the issue to obtain information for *Notices* authors, contact editors and staff, see advertisements, and view issues going back to 1995. See [www.ams.org/notices/](http://www.ams.org/notices/).

# MARCH 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
						Pi Day
15	16	17	18	19	20	21
22	23	24	25	26	27	28
	Emmy Noether (1882)				AMS Sectional Meeting	AMS Sectional Meeting
29	30	31			<b>AMS Sectional Meeting</b> 27-29: University of Illinois at Urbana-Champaign (Central)	
AMS Sectional Meeting		René Descartes (1596)				

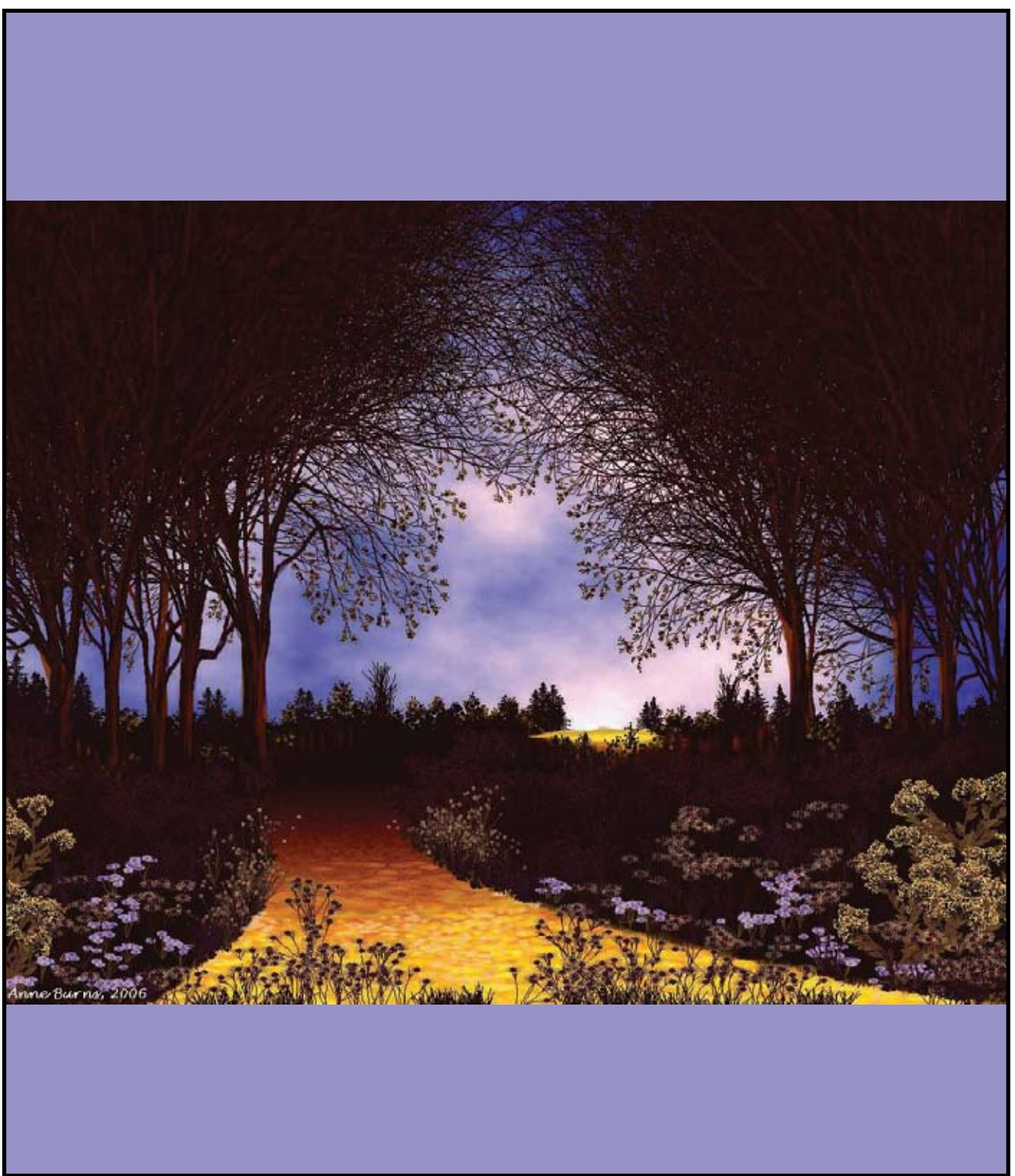


FEBRUARY 2009

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1	2	3	4	5	6	7
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15	16	17	18	19	20	21
22	23	24	25	26	27	28

APRIL 2009

S	M	T	W	T	F	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



“Fractal Scene II,” by Anne M. Burns, Long Island University, Brookville, NY

“Mathscapes” are created using a variety of mathematical formulas. The clouds and plant life are generated using fractal methods. The mountains are created using trigonometric sums with randomly generated coefficients; then, using 3-D transformation, they are projected onto the computer screen. Value and color are functions of the dot product of the normal to the surface with a specified light vector. See the Gallery of Mathscapes and find citations for my articles on modeling trees, plants and mountains, and on “blending and dithering,” at [myweb.cwpost.liu.edu/aburns/gallery/gallery.htm](http://myweb.cwpost.liu.edu/aburns/gallery/gallery.htm).

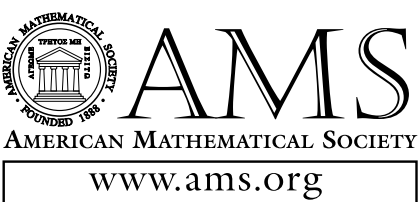
—Anne M. Burns



MATHEMATICS AWARENESS MONTH is held each year in April to increase public understanding of mathematics. See [www.mathaware.org](http://www.mathaware.org) to read the 2009 theme essay, download the poster, and view the related activities of math departments.

# APRIL 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
<b>AMS Sectional Meetings</b> 4-5: North Carolina State University, Raleigh (Southeastern) 25-26: San Francisco State University, CA (Western) 25-26: Worcester Polytechnic Institute, MA (Eastern)						AMS Sectional Meeting
5	6	7	8	9	10	11
AMS Sectional Meeting				Passover		
12	13	14	15	16	17	18
Easter			Leonhard Euler (1707)			
19	20	21	22	23	24	25
						AMS Sectional Meetings
26	27	28	29	30		
AMS Sectional Meetings			Henri Poincaré (1854)	Carl Friedrich Gauss (1777)		

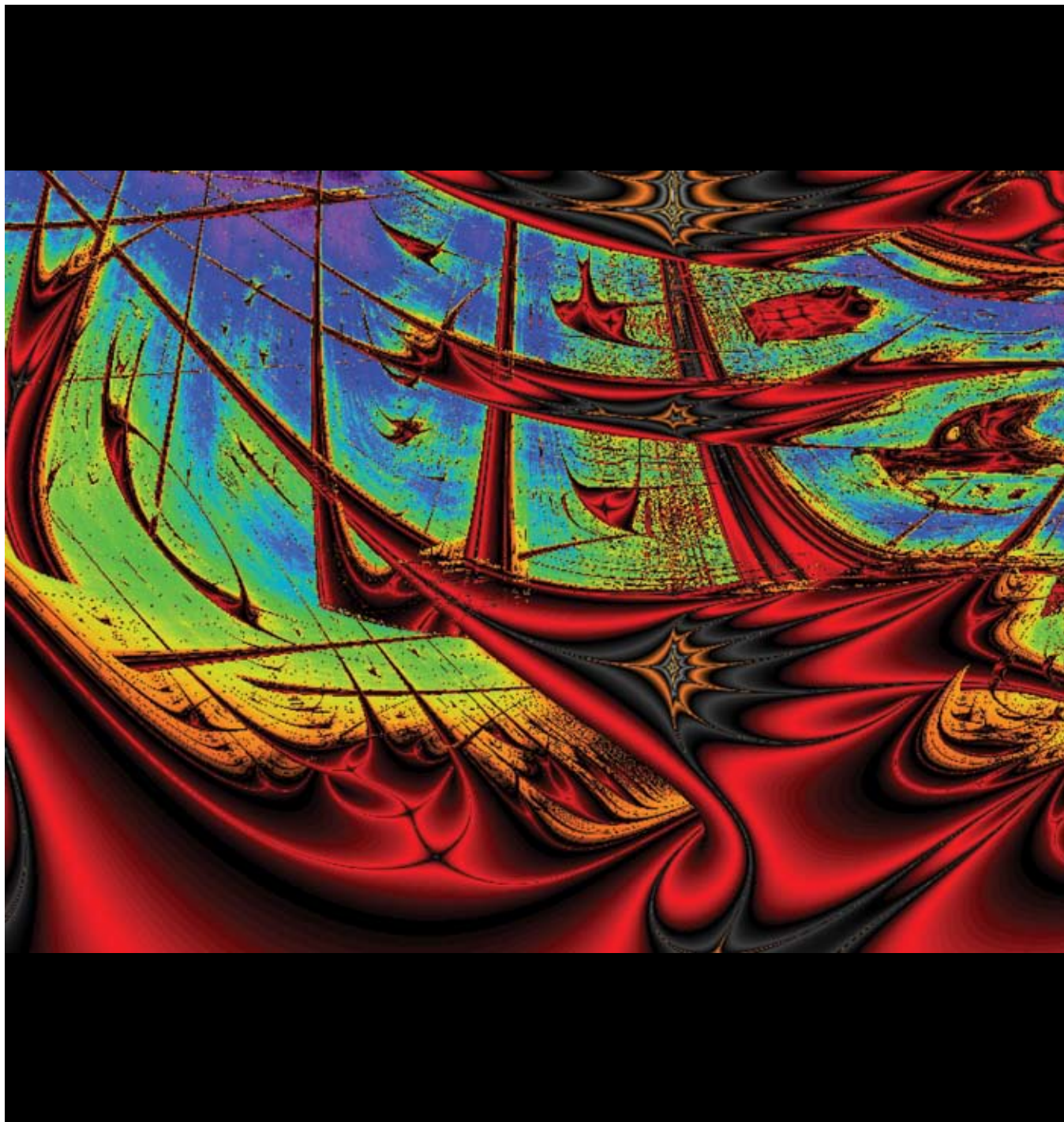


MARCH 2009

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1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

MAY 2009

S	M	T	W	T	F	S
						1 2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



“Bidimensional visualization of the Verhulst dynamics,” by Jean-François Colonna, Centre de Mathématiques Appliquées, École Polytechnique

Grey, orange, and red represent negative Lyapunov exponents; yellow, green, and blue represent positive Lyapunov exponents. The colors distinguish stable systems from those that are chaotic.

— Jean-François Colonna

### MATHEMATICAL IMAGERY

View MATHEMATICAL IMAGERY, mathematics-inspired and mathematically generated works in various media. Send an e-postcard and link to online galleries and articles at [www.ams.org/mathimagery](http://www.ams.org/mathimagery).

# MAY 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
	Victoria Day (Canada)					
24	25	26	27	28	29	30
31	Memorial Day (U.S.)					



“Symmetry Möbius,” by Mary Candace Williams

In order to keep the Möbius as a band, I used only the eleven symmetries that are not based on a hexagon. The fabric was chosen for its mathematical content. Photograph by Annette Emerson.

—Mary Candace Williams



Read the FEATURE COLUMN, a series of essays on various mathematical topics—such as voting, surveying, cosmology, and image compression—written by David Austin, Bill Casselman, Joe Malkevitch, and Tony Phillips, at [www.ams.org/featurecolumn](http://www.ams.org/featurecolumn).

## JUNE 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
					Blaise Pascal (1623)	
21	22	23	24	25	26	27
28	29	30		<b>Mathematics Research Communities, Snowbird, UT</b> See conferences and dates at <a href="http://www.ams.org/amsmtg/mrc.html">www.ams.org/amsmtg/mrc.html</a>		

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

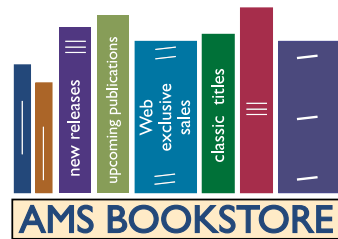
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				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



“Superimposition of Polar Surfaces-2,” by Dejenie A. Lakew

Superimpositions of polar surfaces. Equations:  $\rho = 2\cos(3\exp \sin 3\theta) \cdot \exp \sin 3\theta \cdot \exp(\sin 3(\exp \sin 3\theta))$ ,  $\rho = \exp(\sin 3(\exp \sin 3\theta))$ ,  $\rho = -3\cos(3\exp \sin 3\theta) \cdot \exp \sin 3\theta \cdot \exp(\sin 3(\exp \sin 3\theta))$  with compositions of tilts and turns. Here the first polar surface is the derivative of the second surface, and the third surface is a spatial reflection of the first through the origin with wire frames but with a larger spatial radius.

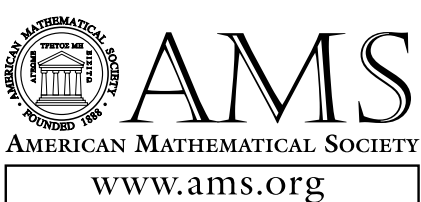
—Dejenie A. Lakew



The AMS BOOKSTORE includes books, journals, gift items, and Web-only sales. See [www.ams.org/bookstore](http://www.ams.org/bookstore) and sign up for the *New Title Email Notification* service.

# JULY 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
			Gottfried Wilhelm Leibniz (1646)			Independence Day (U.S.)
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

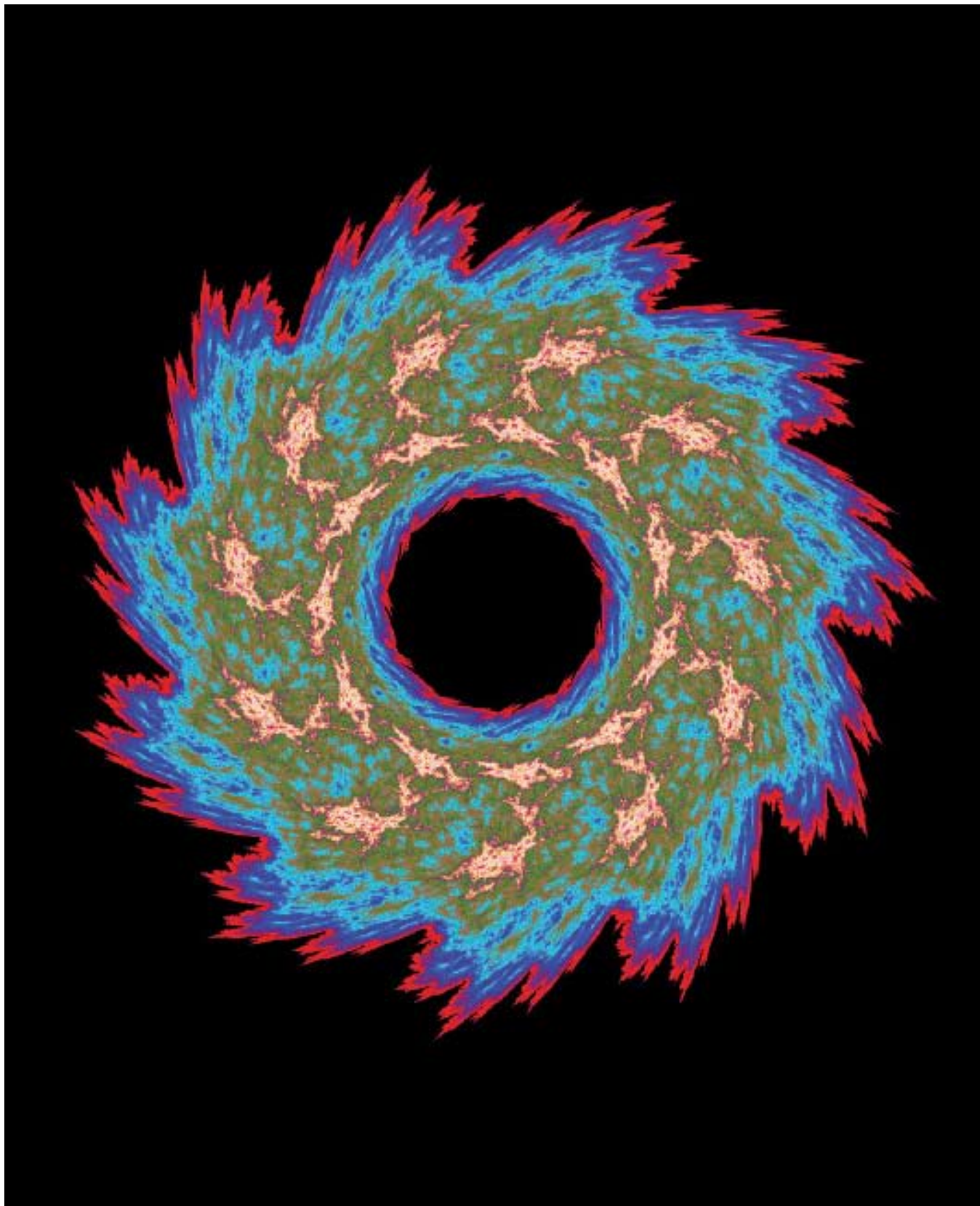


JUNE 2009

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

AUGUST 2009

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					



“Saw,” by Mike Field, University of Houston

“Saw” is a Symmetric Fractal with 11-fold rotational symmetry constructed using methods based on iterated function systems. The image was created many years ago when I was at the University of Sydney, Australia, and appears in *Symmetry in Chaos* (Mike Field and Marty Golubitsky, OUP, 1992).

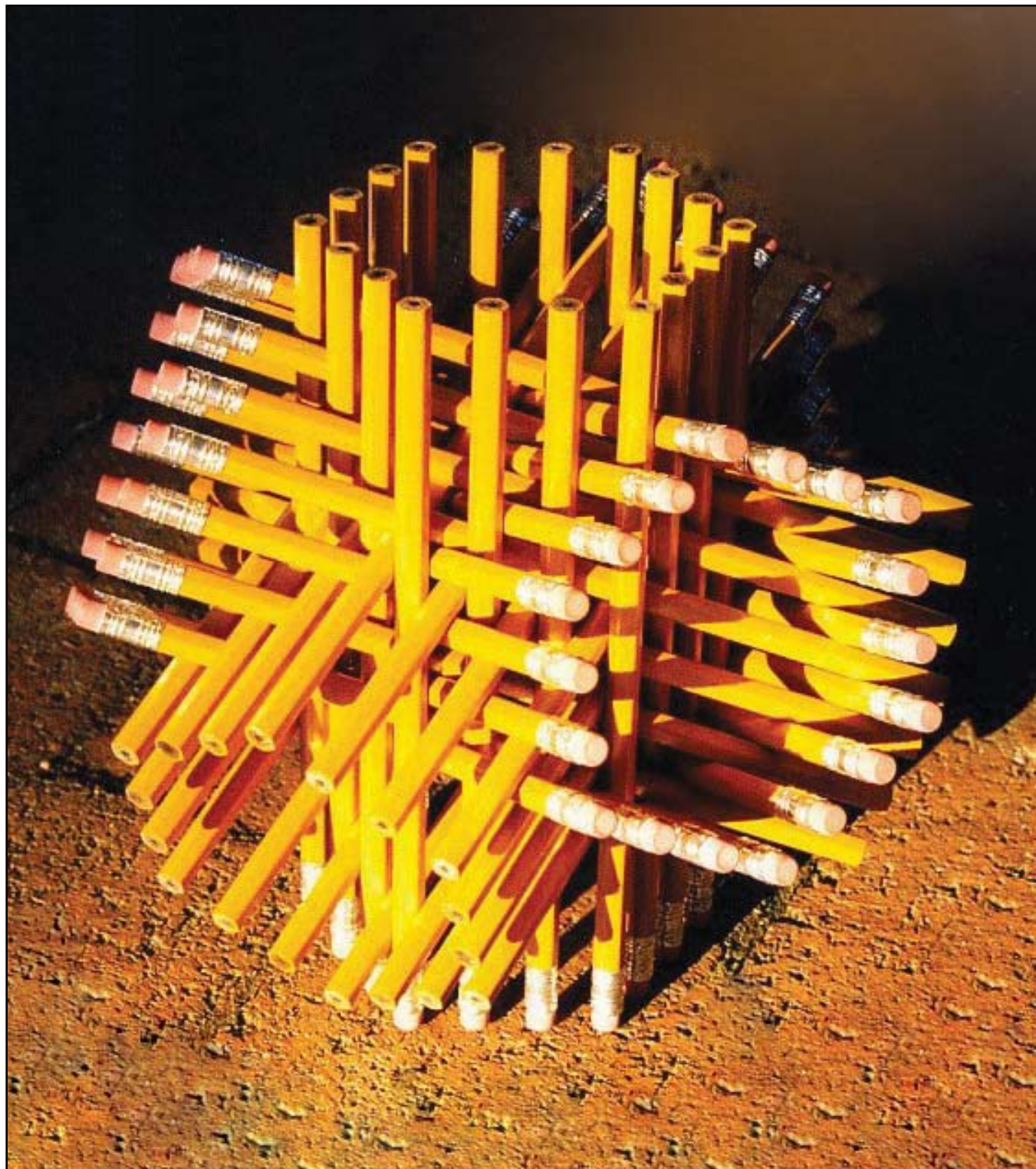
— Mike Field



The AMS sponsors and cosponsors several EMPLOYMENT SERVICES. The Mathematical Sciences Employment Center, held each January at the Joint Mathematics Meetings, is an interviewing program for Ph.D.-level mathematicians seeking employment and for employers, mainly academic, who wish to conduct brief interviews with them. MathJobs is an automated job application system. Employment Information in the Mathematical Sciences (EIMS) posts classified ads. See all the services at [www.ams.org/employment](http://www.ams.org/employment).

# AUGUST 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
	Pierre de Fermat (1601)				Augustin Louis Cauchy (1789)	Ramadan begins
23	24	25	26	27	28	29
30	31					



“72 Pencils,” by George W. Hart ([www.georgehart.com](http://www.georgehart.com))

“72 Pencils” is a geometric construction of 72 pencils, assembled into a work of art. The form is an arrangement of four intersecting hexagonal tubes that penetrate each other in a fascinating three-dimensional lattice. For some viewers, part of the interest lies in the form of the interior. The four hexagonal tubes are hollow, so the sculpture as a whole is hollow. But, what shape is its cavity? What would someone on the inside see? To the mathematician, the answer is “the rhombic dodecahedron,” a geometric solid bounded by twelve rhombuses. See two other views, showing how it looks along various axes of symmetry, at [www.georgehart.com/](http://www.georgehart.com/).

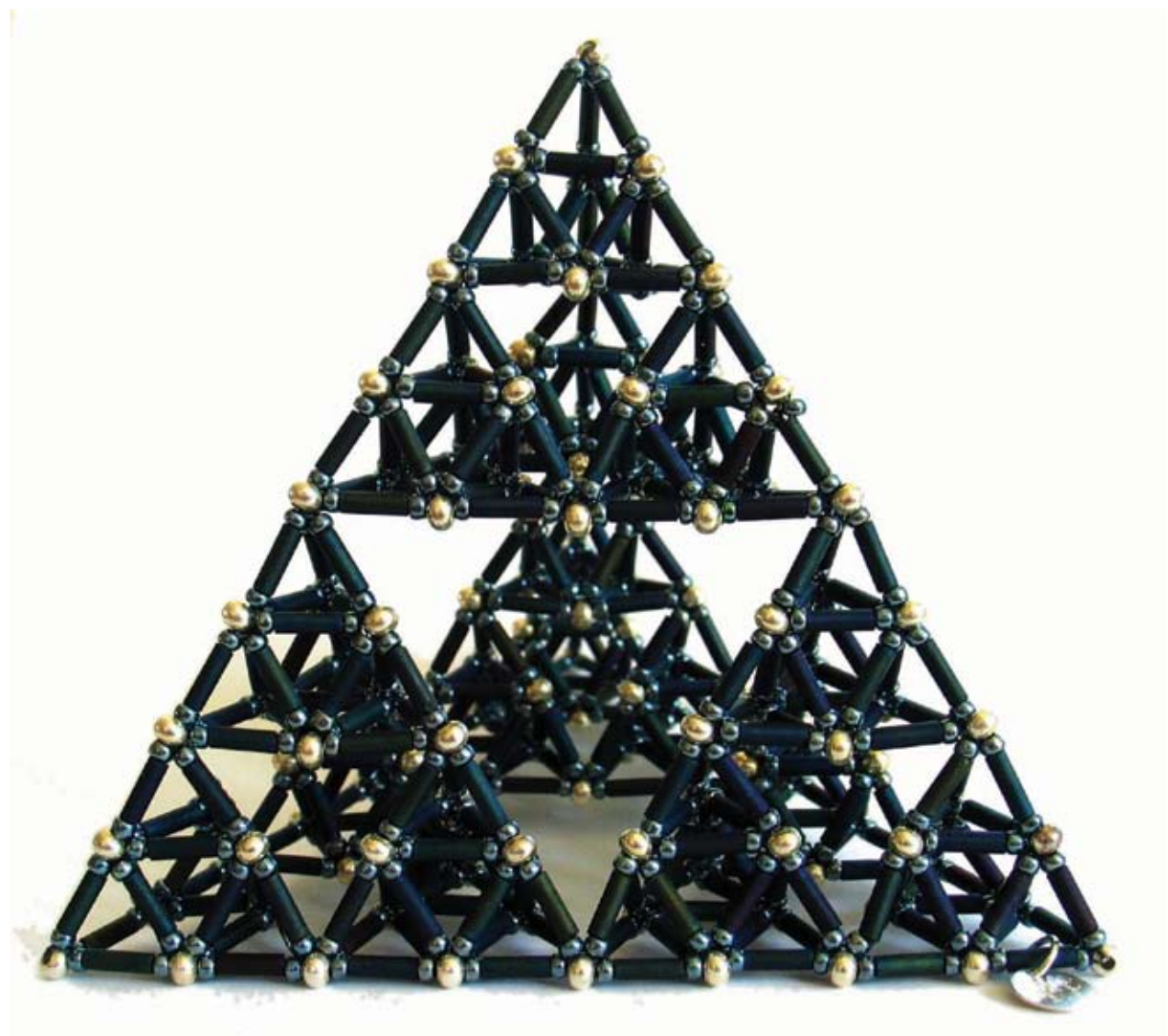
—George W. Hart



**MATHEMATICAL MOMENTS** is a program that promotes appreciation and understanding of the role mathematics plays in science, nature, technology, and human culture. There are more than 70 posters on topics in applied mathematics, some including podcasts of interviews with experts in the fields. Several are translated into Spanish, German, French, Chinese, Japanese, Russian, Portuguese, and Polish. See the entire collection at [www.ams.org/mathmoments](http://www.ams.org/mathmoments).

# SEPTEMBER 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
	Labor Day (U.S.)					
13	14	15	16	17	18	19
				Bernhard Riemann (1826)		Rosh Hashanah
20	21	22	23	24	25	26
27	28	29	30			
	Yom Kippur					



“Sierpinski Tetrahedron (View II)” in glass bugle beads, size 11/0 and 8/0 seed beads, Fireline thread, by Gwen L. Fisher, California Polytechnic State University, San Luis Obispo, and beAd Infinitum ([www.beadinfinitum.com](http://www.beadinfinitum.com))

There are several ways to build a polyhedron with beads. One technique that will always work is to align the hole of a bead along each edge of the polyhedron. Then, the thread connects the beads at the vertices of the polyhedron. The most stable polyhedron is the tetrahedron, because it is made of all triangles. In a beaded tetrahedron, there are three sets of beads in each loop, like the three sides of a triangle. Any regular tetrahedral beaded bead will naturally require six identical sets of beads, one set for each of the six edges of the tetrahedron. In this case, a set is three beads: a short, a long, and a short. Rather than give an example of the simplest tetrahedron, I have used a more complex design based on the structure resulting from the third iteration in the construction of the “Sierpinski Tetrahedron” with its 64 little tetrahedrons. Adding a bead at each interior vertex is necessary to stabilize the structure and make it more rigid.

—Gwen L. Fisher

## MATH in the MEDIA

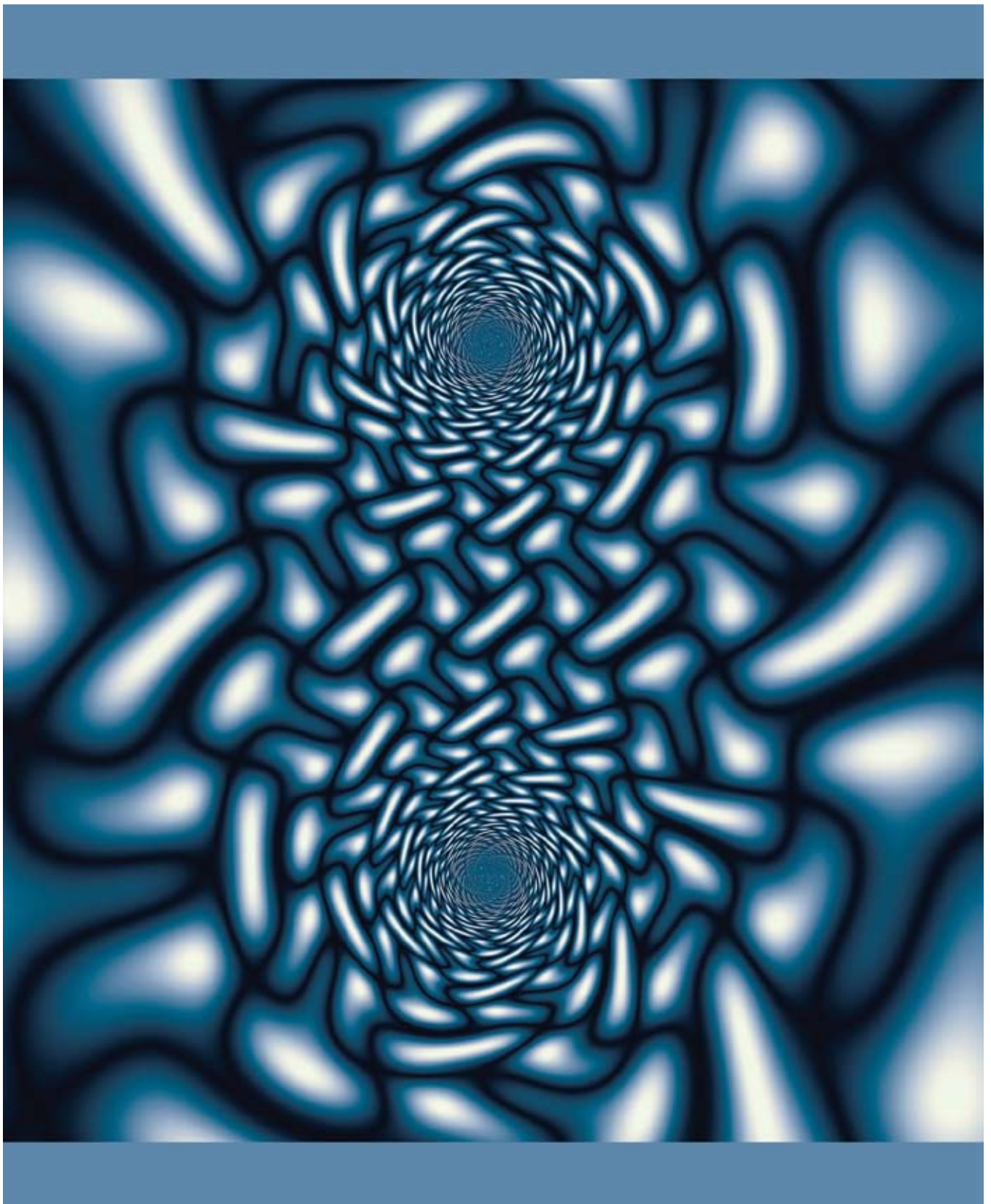
Bookmark MATH IN THE MEDIA to keep abreast of math news as reported in newspapers and general science magazines. The monthly magazine includes Tony Phillips' Take on Math in the Media, Math Digest, and Reviews of books, plays, and films with mathematical themes, at [www.ams.org/mathmedia](http://www.ams.org/mathmedia).

# OCTOBER 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<b>AMS Sectional Meetings</b> 16–18: Baylor University, Waco, TX (Central) 24–25: Pennsylvania State University, University Park, PA (Eastern) 30–11/1: Florida Atlantic University, Boca Raton, FL (Southeastern)				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
	Columbus Day (U.S.)				AMS Sectional Meeting	AMS Sectional Meeting
18	19	20	21	22	23	24
AMS Sectional Meeting						AMS Sectional Meeting
25	26	27	28	29	30	31
AMS Sectional Meeting Evariste Galois (1811)					AMS Sectional Meeting	AMS Sectional Meeting

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

S	M	T	W	T	F	S
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					



“Tube \*X,” by Chaim Goodman-Strauss, University of Arkansas

This strange image is just of a distorted but perfectly sensible regular pattern in the Euclidean plane, of type \*X. A complicated image like this can be built from simple steps and can be expressed in just a single formula; the colors of the initial pattern are from the values of  $f(x,y) = |\cos(x-\cos(y+a))\cos(y-\cos(x+a))|$ , with  $a = \pi/5$ .

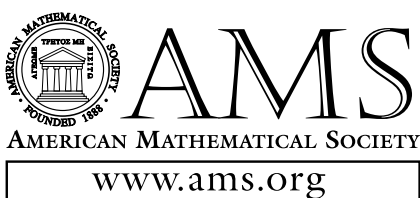
—Chaim Goodman-Strauss



The AUTHOR RESOURCE CENTER, including MRef and L<sup>A</sup>T<sub>E</sub>X resources, are all free on the AMS website at [www.ams.org/authors](http://www.ams.org/authors).

# NOVEMBER 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 AMS Sectional Meeting	2	3	4	5	6	7 AMS Sectional Meeting
8 AMS Sectional Meeting	9	10	11 Veterans' Day (Observed)	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26 Thanksgiving (U.S.)	27	28
29	30				AMS Sectional Meeting 7-8: University of California, Riverside (Western)	

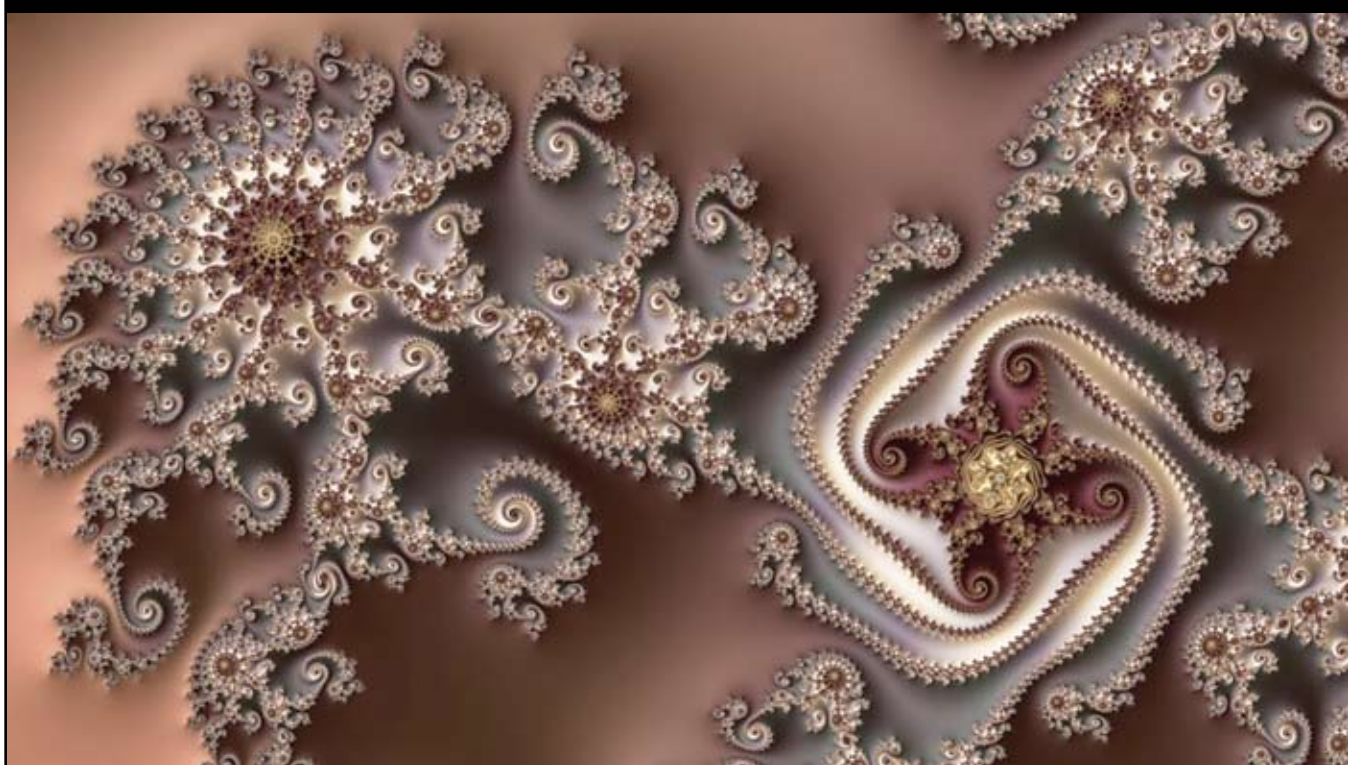


OCTOBER 2009

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4	5	6	7	8	9	10
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18	19	20	21	22	23	24
25	26	27	28	29	30	31

DECEMBER 2009

S	M	T	W	T	F	S
				1	2	3
	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



**“Encore,” by Paul Decelle**

Paul DeCelle is a mechanical engineer in Michigan. His image for this exhibition is a very handsome composition based on a portion of the Mandelbrot set (magnified approximately 10 to the 13th times). The artist has used techniques known for more than ten years, but can still surprise the viewer by its majesty, especially in large-scale reproductions. If we imagine the Mandelbrot set as an extensive mountain range, the composition relies on two basic principles. The “Slope” algorithm assigns the same color to those regions with the same height, like in a topographical map. The “Lighting” algorithm colors towards white those regions of the surface illuminated by an imaginary sun sitting on the horizon, while the shadows partially obscure the surface. The result is a three-dimensional effect that enriches and enhances the detail in the original fractal (from “Fractal Art: Beauty and Mathematics” exhibition catalog). This was one of twenty-five works selected through the International Contest of Fractal Art ICM2006, which Benoît Mandelbrot, “the father of fractal geometry”, chaired, and was part of the “Fractal Art: Beauty and Mathematics” exhibition held at the International Congress of Mathematicians in Madrid, Spain, in August 2006. “Encore” and other images from the exhibit are in the album “Fractal Art” at [www.ams.org/mathimagery/thumbnails.php?album=13](http://www.ams.org/mathimagery/thumbnails.php?album=13).

Mark your 2010 calendar with the following AMS MEETINGS: Joint Mathematics Meetings in San Francisco, CA (Jan 13–16); Sectional meetings at the University of Kentucky, Lexington, KY (March 27–28), University of New Mexico, Albuquerque, NM (April 17–18), Macalester College, St. Paul, MN (April 10–11), Notre Dame University, IN (September 18–19). See the most current information about AMS meetings and conferences at [www.ams.org/meetings](http://www.ams.org/meetings).



# DECEMBER 2009

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12 <small>Hanukkah begins</small>
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	<small>Christmas</small>	<small>Kwanzaa begins</small>

# 2009 at a glance

JANUARY

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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY

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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE

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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY

S	M	T	W	T	F	S
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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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10	11	12	13	14	15	16
17	18	19	20	21	22	23
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31						

# 2010 at a glance

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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27	28	29	30			

JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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27	28	29	30			

DECEMBER

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## MATHEMATICAL IMAGERY



### MATHEMATICAL IMAGERY

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**The connection between mathematics and art goes** back thousands of years. Mathematics has been used in the design of Gothic cathedrals, Rose windows, oriental rugs, mosaics and tilings. Geometric forms were fundamental to the cubists and many abstract expressionists, and award-winning sculptors have used topology as the basis for their pieces. Dutch artist M.C. Escher represented infinity, Möbius bands, tessellations, deformations, reflections, Platonic solids, spirals, symmetry, and the hyperbolic plane in his works.

Mathematicians and artists continue to create stunning works in all media and to explore the visualization of mathematics--origami, computer-generated landscapes, tessellations, fractals, anamorphic art, and more.

A mathematician, like a painter or poet, is a maker of patterns. If his patterns are more permanent than theirs, it is because they are made with ideas.  
—G. H. Hardy, *A Mathematician's Apology*

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#### Jean-Francois Colonna :: A Gateway Between Art and Science



Mathematics plays a very particular role in the sciences. Scientists are involved in invention or discovery, the basic basis of science for more than 2000 years. As long as a mere language in which to formulate creative thought process that can be used to describe the world.

---Jean-Francois Colonna, Centre de Mathématiques, Université de Paris, France  
www.lactamme.polytechnique.fr

#### Green L. Fisher :: Woven Beads



Weavers of beads use a needle and thread to weave beads into composite clusters, usually with mathematical patterns. Mathematically, many beaded beads can be woven precisely, the hole through the middle of each bead corresponding to an edge of the polyhedron. The number of these "edges" together to form a polyhedron.

--- University, San Luis Obispo, and beAd

#### Carlo Sequin :: Mathematical Images



Since high school I have been fascinated by geometry. I enjoyed constructing the more complicated Platonic solids with ruler and compasses, as well as reading about the 4th dimension. While at Bell Labs in Murray Hill, I was introduced to the field of Computer Graphics, and later developed the Berkeley UniGrafix rendering system, so that I could depict objects more complex than I could build. Since then, the focus of my work has been on computer-aided design (CAD) tools -- for engineers, architects, and artists.

--- Carlo Sequin



"Birds in the Sky" by Carlo Sequin, University of California, Berkeley



Dear Peter,  
Here's one of the e-postcards from the site.

Nancy

You are viewing page 1

Use the links below to move back and forth between albums.

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#### GALLERIES & MUSEUMS

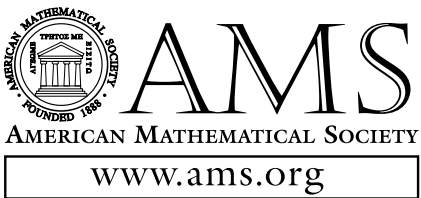
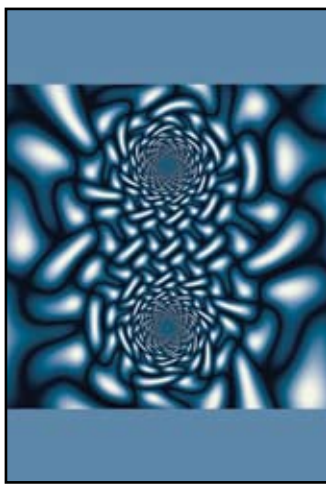
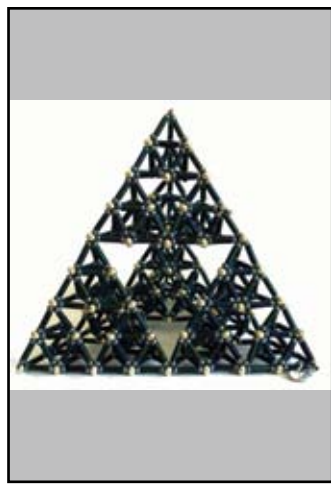
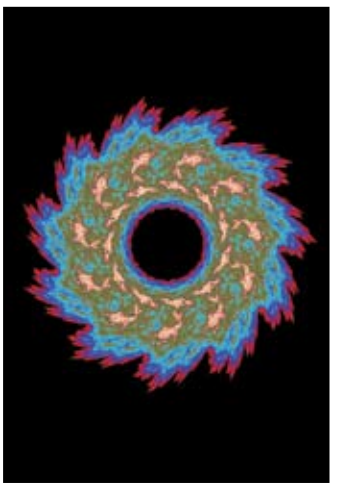
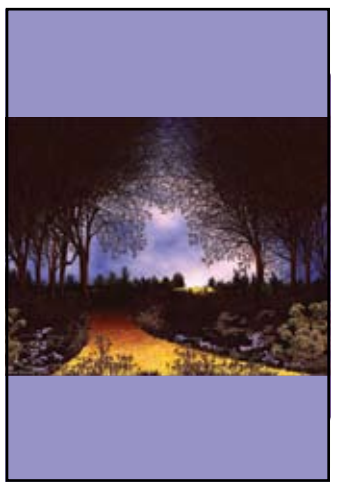
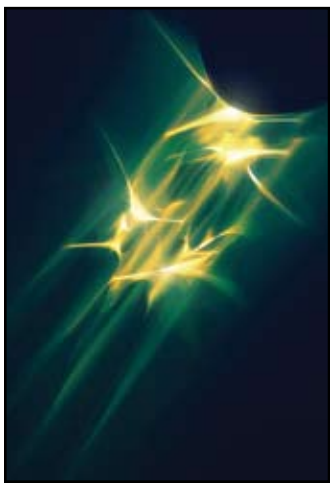
- Bridges: Mathematical Connections in Art, Music, and Science
- M.C. Escher: The Official Website
- Images and Mathematics, MathArts
- The Institute for Figuring
- Kalender, by Horag Hauser
- The KnotPlot Site
- Mathematical Imagery by Joe Leyn
- Mathematics Museum (Japan)
- Visual Mathematics Journal

#### ARTICLES & RESOURCES

- Art & Music, MathArts
- Geometry in Art & Architecture, by Paul Carter (Dartmouth College)
- Rhymery and Pigeonry, by John Boyd-Bent
- International Society of the Arts, Mathematics and Architecture
- Journal of Mathematics and the Arts
- Mathematics and Art, the April 2003 Feature Column by Joe Malkevitch
- Maths and Art: the wholestop! issue, by Lewis Dethlefsen
- Mathematics and Art, (The Theme for Mathematics Awareness Month 2003)
- Viewpoints: Mathematics and Art, by Annelise Cozzani (Franklin & Marshall College) and Marc Frantz (Indiana University)

[www.ams.org/mathimagery](http://www.ams.org/mathimagery)

# 2009 Calendar of Mathematical Imagery



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