FOREWORDS   ACTIVITIES   RESOURCE UPDATE   GALLERY

Dear Colleagues,

Three events are taking place this month.

First, Springer will be working on the publishing of the Proceedings of the July 2010 Conference (around 200 pages). The book will appear before the end of the year.

The second interesting event will be the opening of a mathematical exhibition by the Cartier Foundation in Paris (0ctober 21-February 19) with the help of some mathematicians from the IHES (Institut des Hautes Etudes Scientifiques). Several years ago, my suggestion to the Director of the Foundation to set up an exposition math & art did not receive any reply. The idea seems to be progressing, however, as is observed in the quite recent explosion of conferences concerning science and art. It seems also, that the general attitude towards mathematics is evolving. A possible significant index is the fact that fashion designers, looking for novelty, sometimes make use of science. This can be witnessed in the implication of Fields medal William Thurston with Issey Miyake. "Issey Miyake Meets Maths" was the text of the invitation to their 2010 show. Walking by a shop belonging to the famous Hermès Company, I quite recently saw a beautiful scarf with red and yellow mathematical motives. Hermès is popularizing maths !

Lastly, is the publication of my report on the Aime exposition in the French Gazette des Mathématiciens, to appear at the end of October, then going online in the Resource Center. That report contains a kind of experimental proof of the pertinence of mathematical exhibitions in breaking down the barriers between mathematics and the public, whatever it may be. Mathematical exhibitions are the most useful when accompanied by a few convenient lectures around well chosen works, corresponding to the background of the listeners. Of course, the pedagogical qualities of the various lecturers are also a very important factor in the success of the lectures. Indeed, the report could be used within a general discussion on the contents and the ways to diffuse mathematics among various publics. The fact is that such a detailed study does not exist for the moment.

One will find in the article an allusion to the all too tiny exhibition that was held at the Palais de la Découverte, on the initiative of IRCAM on the occasion of the III Conference on Mathematics and Computation in Music. I would like to point out the publication at the same time of an interesting article by Rob Schneiderman entitled "Can one hear the sound of a theorem?" (Notices of the AMS, 58, 7, August 2011, 929-937). This author's critical points of view are interesting although one can regret the absence of even outlines of new proposals to improve the situation. Progress could be made in the representation of the timbre, in the analysis and in the representation of some components of the semantics of musical works. Maybe some of you could take the opportunity to submit new ideas.

With my best wishes,

Claude P. Bruter

ANNOUNCEMENT

October 21, 2011 - March 18, 2012. The Foundation Cartier pour l'art contemporain will present the exhibition Mathematics: A Beautiful Elsewhere, an exhibition developed in association with the Institut des Hautes Études Scientifiques (IHES) and under the patronage of UNESCO. For this unprecedented event, the foundation has opened its doors to the community of mathematicians and asked artists with whom it has worked closely in the past to accompany them in order to create opportunities for seeing, hearing, doing, thinking and interpreting mathematics. More information on the **Foundation** site.

Oct. 24 - 28, 2011. To mark the 200th anniversary of the birth of Evariste Galois, the Institute Henri Poincaré and the Mathematical Society of France hold a series of events Oct. 24. 28. More information on the **Gallois Bicentennial site.**

January 6, 2012. The Journal of Humanistic Mathematics will host a reading of poetry-with-mathematics on Friday January 6, 5-7 PM in Boston's Hynes Convention Center at the annual Joint Mathematics Meetings. Both mathematician-poets and others who use mathematics in their poems are invited to submit. Send work prior to December 1, 2011 to **Gizem Karaali** up to 3 poems that involve mathematics (in content or structure, or both) -- no more than 3 pages -- and a 25 word bio.

The biannual journal **ARGOS** , published by the CRDP of the Académie de Créteil. is an academic forum reporting on educational trends in French schools, colleges and high schools. Issue # 48 (In French only) is now available on their **site.**

The **Association Animath** is looking for proposals and recommendation for its **Cap'Math** project. This projects will focus on outreach intervention with school level children to foster the understanding of Mathematics and the mathematical culture. For more information contact Bruno Theheux at **Animath.**

The **Initiative Group for the Scientific and Cultural Organization** (the GICS) is an association founded by students in order to promote intellectual openness, reflection, and discovery in science. For info, contact**: CICS.**

ACTIVITIES

Two ESMA members were award-recipients at a Science and Art competion held in Los Alamos, New Mexico. Congratulation to both!
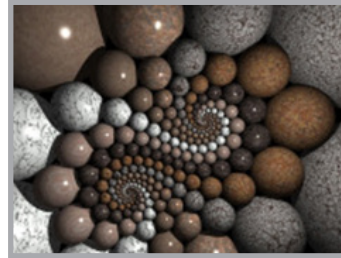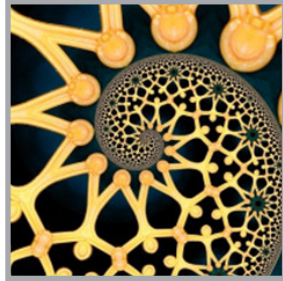
Francesco deComite, best of show & best Visual impact. Jean Constant, best representation of a scientific phenomenon.

Sept. 29 – Oct. 10, 2011. TENSEGRITY. An exhibition by ESMA member Philippe Rips based on 20 years of research and the the work of R.B. Fuller and K. Snelson. Gallery Rips, 16 rue Jacquemont. Paris Fr. Information, schedule **rips.philippe@bbox.fr**

Official footage of Professor Huylebrouck 400 meters reverse experiment now available on YouTube, compliments of the **BBC**

RESOURCE CENTER

Posted this month on the ESMA website, resource center page. For suggestion, recommendation, comment on new posts: info@mathart.eu

- GERDES, Paulus. TINHLELO. Exhibits and analyses of colored circular winnowing baskets collected by the author since the end of the 1970s. Foreword by the Hon. Aires Aly, Prime Minister of the Republic of Mozambique. EN (Resource, Mathematics and Art)

- OSSERMAN, Robert. Mathematics of the Gateway Arch. Notices of the AMS, vol 57. EN (Resource, Mathematics)

GALLERY

Sculptures by **Carlo H. Séquin** *Inspired by Nature's Minimal Surfaces...*

"Cube-Volution-5" (June 2009) - Bronze, 2 patinas, 6" x 6" x 6". Soap films spanning arbitrary bent wire-frames take on a smooth shape with nicely balanced saddle surfaces. In equilibrium, the mean curvature at every point of such a surface is zero, since positive and negative curvatures exactly cancel out. In this sculptures a minimal surface with two tunnels has been formed in a boundary composed of 12 quarter circle arcs.

OF INTEREST

On Quora last month:

#### - *What is the most beautiful equation?*

$$e^{\pi i} + 1 = 0$$

This equation combines five of the most important constants in mathematics with the three fundamental operations (addition, multiplication, and exponentiation). It's almost mystical that these values are even related to one another. (*Tracy Chou, software engineer).*

- *What is the relationship between music and math?*

We describe both mathematics and music in their own notations. But music theory is often described with mathematics. Harmonics and harmonic series can be described as periodic functions (like sine and cosine in trigonometry), as Daniel Helman points out with the Fourier Analysis. (*Tiana Cornelius, Neo-Opera Singer*).

"Beyond Infinity" by Serge Salat
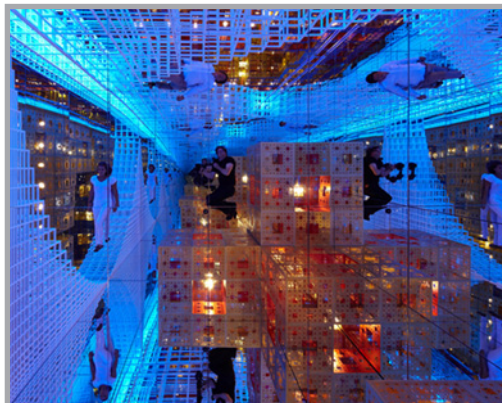
Beyond Infinity is an installation by French artist Serge Salat. It is sponsored by automaker Buik and installed at the Shanghai's Westage Mall.

Measuring 12.45 by 10.8 meters at a height of 3.8 meters, the structure is completely closed, composed of a steel infrastructure with honeycomb aluminum panels covered in mirrors. Internally, the space is designed around the trigram of the yi king, utilizing spatial techniques traditional of suzhou gardens. Painted wooden grids and steps lend additional structure, while the fractal objects are composed of wooden frames covered with punched aluminum anodized panels.