EUROPEAN SOCIETY FOR MATHEMATICS AND ART
NEWSLETTER
Volume OO1. Issue 007 September 2010

FOREWORDS ACTIVITIES RESOURCE UPDATE GALLERY

Dear Colleagues,

Education outreach committee

The European Mathematical Society posted in its September issue an article about ESMA under the title « Fine arts to the service of Mathematics ». We announced it in the June issue of our Newsletter and will keep you informed of our colleagues' feedback on the content of this article.

Cultural, educational and psychological reasons among other, motivated the creation of the Society. Many people have been involved in the educational aspects of mathematics since its origin; literature on this topic is immense. The first part of my book "Comprendre les Mathématiques" (Understand mathematics) - Odile Jacob, Paris 1996 - still holds today some merit as reference . The originality of our perspective developed through ARPAM and now ESMA is the introduction of an artistic component in the educational process at all levels of complexity.

The future of education is of serious concern to all. Difficulties of all kind challenge a well balanced integration of younger generation in a cohesive discourse all can benefit from.

Academic and medical writer Marie-Rose Moro published recently an article in the French newspaper Le Monde that emphasizes the issue as applied to a pilot experiment in a teenage center - the Maison de Solemn - :
It is urgent to emphasize artistic creativity to help adolescent find and define what it means to be a teenager today and more specifically explore all facet of what growing up means.
I hope that many ESMA members will participate in the work of Mike Field's Educational Outreach committee (mikefield@gmail.com), in order to deepen the relations between mathematics and art, get a better understanding of the fundamentals that contribute to the development of what is felt and perceived as beautiful, a deeper appreciation of the notion of beauty as an attractive proposition, and how those diverse elements can be brought together to lower the psychological barriers that hold back the public from the field of mathematics.

Communication & Exhibit coordination committees

Jean Constant and Andreas Matt have been working on an event calendar for the ESMA site. You can now check on upcoming lectures, exhibit, events related to Mathematics and Art as they are been forwarded to us by interested individuals and Institutions. If you want youe event to be listed in the calendar, please send your info & date(s) at calendar@mathart.eu

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ESMA 2010 conference proceedings

All individual papers should have been sent by now.

In addition to the publishing possibilities listed in the August newsletter, we are also considering at the recommendation of Simon Salamon a new alternative with the Rendiconti di Torino: http://seminariomatematico.dm.unito.it/rendiconti/

The advantages of publishing with the Rendiconti is its low cost, provided I can oversee your final draft in .pdf format.

The Rendiconti has free online access and quick publication. Each volume is 80-150 pages, 2 of the yearly publications are dedicated to conferences and the 2011 calendar is open.

Problem corner

The Poincare catalogue features works by Jean François Colonna among which are several partial Julia and Mandelbrot visualizations. We are looking for additional line drawing and geometrical material on the subject.

Legal adviser

Philip McLeod has accepted to be our juridical consultant and adviser.

I met Philip through T.C. KUO, who was at the IHES in the 1970s and worked for a while in China before taking a position as professor of Mathematics in Sydney, Australia. T.C. later sent me a student, Philip McLeod. Philip studied dynamical systems and differential geometry under Harold Rosenberg at Paris VI. He also played rugby. To my surprise, after completing his DEA he decided to go back to Australia to train as a lawyer. While studying law, he taught mathematics in high school for five years. He has been practicing law for the last fifteen years including two years in London. He now works as a senior law consultant for several corporations in Sydney. He told me several times that his training in mathematics had been key to his rapid rise in the legal world. His diverse interests include cricket, rugby, piano, Latin and a great affinity for France. He has accepted to be our legal adviser. Thanks Philip. His e-mail is philip.mcleod@bigpond.com

With my best wishes,

Claude P. Bruter
9-8-2010

ACTIVITIES

Posted this month on the ESMA website, activities page. For information, listing of upcoming events: info@ma-thart.eu

- **On-going: 06/07/10 - 09/15/10**: ESMA Mathematics & Art exhibit. Institute Henri Poincaré. Paris, FR. Monday – Friday, 9:30 AM – 18:00 PM or by appointment

- **09/16/20:** Magic, origami and puzzles: The art of mathematics. Erik Demaine - Massachusetts Institute of Technology. University of Calgary, CND. Murray Fraser Hall.

- **09/21/10 - 10/07/10:** IMAGINARY MUSEUM exhibit, Zurich. SW. Algebraic Geometry, Differential Geometry, Symmetry, Geometry. Mathematisches Forschungsinstitut Oberwolfach. www.imaginary-Exhibition.com

RESOURCE CENTER

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

- ALEXANDERSON, Gerald L. Department of Mathematics and Computer Science, Santa Clara University, Santa Clara, California. Luca da Pacioli and Leonardo's drawings of polyhedra, Bull. AMS, 47, 3, 553-556.

- DEZARNAUD, Christine - SEVIN, Alain. "Histoire des polyèdres" Vuibert, Paris, 2009. Historical overview of the polyhedra from its origin to the crossroad of science, philosophy and art.

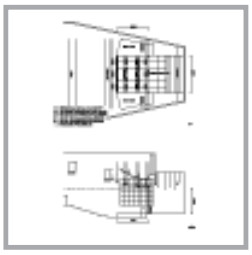
- FERGUSON, Helaman and Claire. "Celebrating Mathematics in Stone and Bronze" Notices of the AMS, 57, 7 840-850. Helaman Ferguson's sculptures in stone and bronze celebrate ancient and modern mathematical discoveries, melding the universal languages of sculpture and mathematics from initial conception through mathematical design and computer graphics to their final form.

- GERDES, Paulus. "TINHLELO" Interweaving Art and Mathematics. Colorful basket trays from the South of Mozambique. Exhibits and analyses of colored circular winnowing baskets collected by the author since the end of the 1970s. (Lulu, 2010, 132 pages. Color) Foreword by the Hon. Aires Aly, Prime Minister of the Republic of Mozambique.

- KALAJDZIEVSKI, Sasho. University of Manitoba, Winnipeg, Canada Math and Art: An Introduction to Visual Mathematics. Cover by Jos Leys. CRC Press, Boca Raton, 2008.

GALLERY

Ryoji Ikeda



Ryoji Ikeda, Japan's leading electronic composer, focuses on the minutiae of ultrasonics, frequencies and the essential characteristics of sound itself. His work exploits sound's physical property, its causality with human perception and mathematical dianoia as music, time and space. "Formula", a constantly evolving work updated with each presentation, is a perfect synchronization between Ikeda's sound frequencies and the movements on the screen. It places the viewer in a binary geometry of space, and exploits the darkness to amplify the perceptions, with outstanding success. Ikeda aims for the complete integration of the various elements, composing music, images, lighting and orchestrating the relationships between them through a highly precise score. Ryoji Ikeda received the Golden Nica prize at Prix Ars Electronica 2001 in the Digital Music category. More on Ryoki Ikeda at: www.ryojiikeda.com

MATHEMATICAL GAME

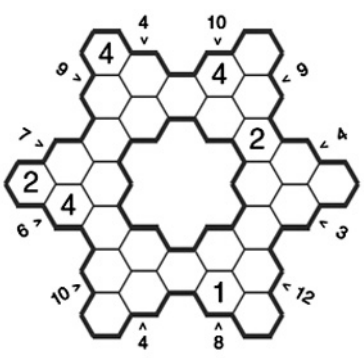
Trakasu #2
By François Tard

Select a number from 1 to 7 for each cell

Notice that the hexagonal cells that have a common side are aligned by two or seven in three directions

1) similar numbers cannot be displayed more than once in the same alignment

2) the exterior numbers outside the grid are equal to the sum of two numbers in the alignment outlined by the arrow.



(Solution p.4)