EUROPEAN SOCIETY FOR MATHEMATICS AND ART
NEWSLETTER

Volume OO2. Issue 12 *December 2011*

Dear Colleagues,

I am not too pessimistic about the fate of Europe. I am not too pessimistic about the fate of Europe. It might, and in my opinion should, become more federal and more efficient. *(cc Ed.note, p.5)* *But whatever happens, I suspect that ESMA's work will survive. Remember that we are working in three different directions.*

While our first goal, setting up summer and winter schools, is still in its early development stage, the other two have turned out to be very rewarding.

The exhibitions, now accompanied by lectures, have been quite successful and are becoming widely recognized as a useful pedagogical tool to reach a broad and diverse audience. It can be said that one of ESMA's main objective, which is to remove the psychological barriers against mathematics, may soon be attained.

Now, some god news as a Christmas present: the third ESMA objective is the development of the ARPAM project so that the mathematical park concept might become reality. As the saying goes, "Never two without three". Two attempts at developing a park in France did not yield results. Perhaps the third one will!

The third attempt will at least aim to provide a better visualization of the project. One can find sketches of two follies, the Seventh Temple and the Boy Surface, toward the end of a paper I wrote and titled "Saverne Conference". The text is available in the Resource Center of the ESMA site under "Mathematics and Art".

The park's architectural 3D modeling is going to be made in Russia. Dmitri Kozlov, of the Russian Academy of Architecture, and ESMA member in charge of architectural projects, has received local political and scientific support. A major role in creating the visualization will be played by the Center for Popularization of Mathematics of the Russian Academy of Sciences, the Steklov Mathematical Institute. This way, should the ARPAM project in Kaluga not succeed, maybe because of financial constrains, its visualization will still remain.

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A complete 3D modeling of the park is a tremendous task. It could be transferred into a film that ought to be appreciated not only by our contemporaries, but also by our very distant descendants issued from robotics, when flying over space-time.

The Cartier Foundation should be greatly interested in the project's realization, despite the fact that its first installment may be carried out near Moscow.

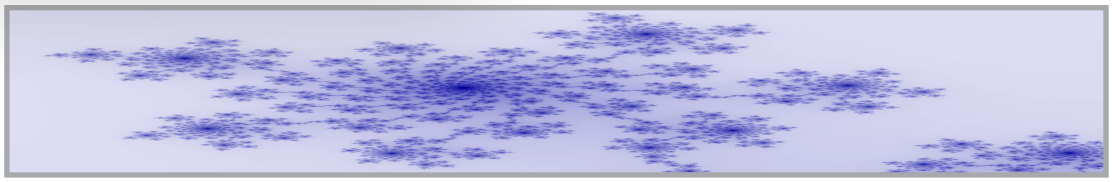
The last good news is Springer publication of the proceedings of our last conference, next February. We can only regret that there will be no illustration or picture on the front cover of "Mathematics and Modern Art". The reason that has been put forward to justify the absence of visuals is that the volume is part of a series of proceedings. An exception could have confirmed that rule. It would indeed have been a useful exception.

In any case, I hope you'll enjoy reading the book.

Best Wishes and Happy Holidays,

Claude P. Bruter

ANNOUNCEMENT



Rhapsody in Numbers. Courtesy Xander Henderson

January 4 - 6, 2012. 2012-Joint Mathematics Meetings. Hynes Convention Center Boston, MA. Organized by The Mathematical Association of America (MAA) and the American Mathematical Society (AMS) with the participation of the Association for Symbolic Logic, the Association for Women in Mathematics, the National Association for Mathematicians, and the Society for Industrial and Applied Mathematics.

January 2012 to May 15, 2012 COMPETITION FOR AN OPEN SOURCE EXHIBITION OF VIRTUAL MODULES. The modules submitted to the competition will be part of an open source exhibition on the theme of Mathematics of Planet Earth. The exhibition will have a virtual part, as well as instructions to realize material parts to stimulate imagination on the many domains where mathematics plays a crucial role in planetary issues. More information on the MPE 2013 webpage.

On- Going. Wired.com staff-produced photos are now being released under a Creative Commons (CC BY-NC) license. The magazine will make them available in high-res format on a newly launched public Flickr stream.

Performing Arts. Several members have asked us about material on Mathematics and the Performing art. If you have any suggestion/recommendation on theater play, performing & dancing art relevant to mathematics and art - past, present and future, you are welcome to share it with our membership in the resource center. Send your information to info@mathart.eu Thank you.

ACTIVITIES

ESMA members' activities throughout the month & upcoming activities. To be listed in this column: info@mathart.eu

December 1-7, 2011. Topological ice cubes. Hervé Lehning. Photographs, paintings, mathematical objects. Rips Gallery, 16 rue Jacquemont, Paris. FR. (33) 06 61 75 84 47.

January 4-7, 2012. 2012 Joint Mathematics Meetings (JMM). Boston, MA. Selected exhibitors & ESMA members: **Jean Constant, Francesco De Comité, Michael Field, George Hart.** Congratulation all!

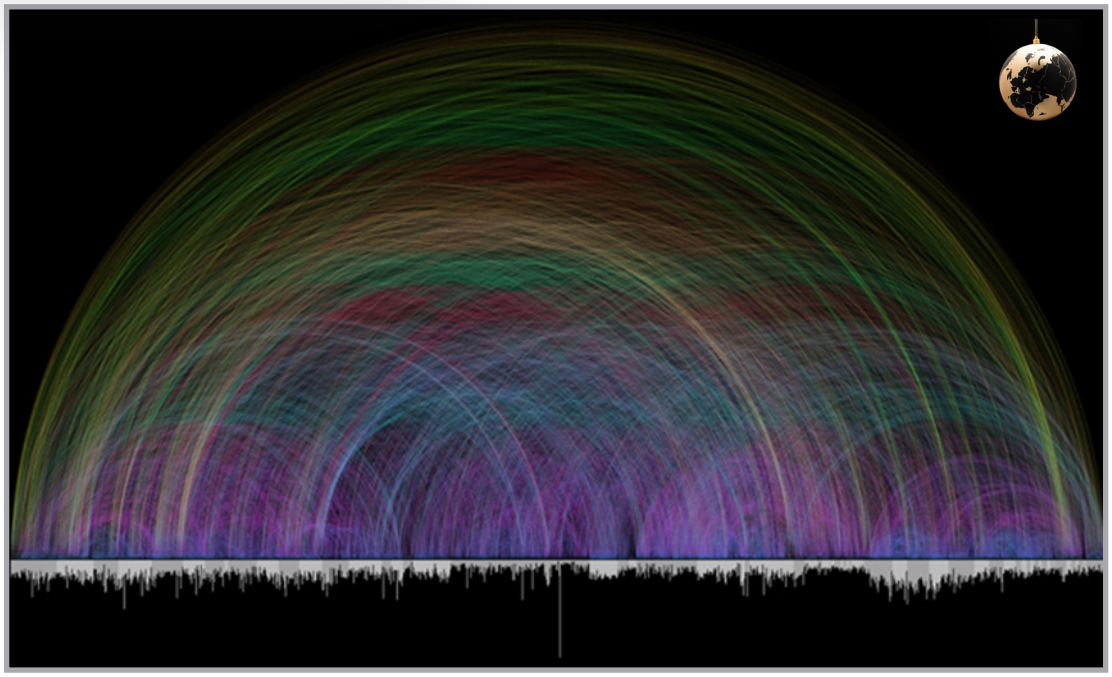
RESOURCE CENTER

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

Dani Novak. *"SeeLogo" .* SL is a computer language that connects words and pictures. It is possible to go from words to a picture. By seeing the pictures and the words at the same time, you will come to understand mathematical ideas in a holistic and meaningful way.(Resource, General Interest, software). Dr. Novak cofounded an organization (www.family-math.org) which gives free workshops, organizes math days and free mathematical summer camps for children.

- Mandelbulb3Dv1751 Update. Mandelbulb3D is a Windows Fractal Generator that can run on MAC platform as well. Exploration of the Mandelbulb software by ESMA members **Jos Leys** and **Jeremie Brunet** can be accessed on the fractalforum site (Resource, Mathematics & Art, software)

GALLERY

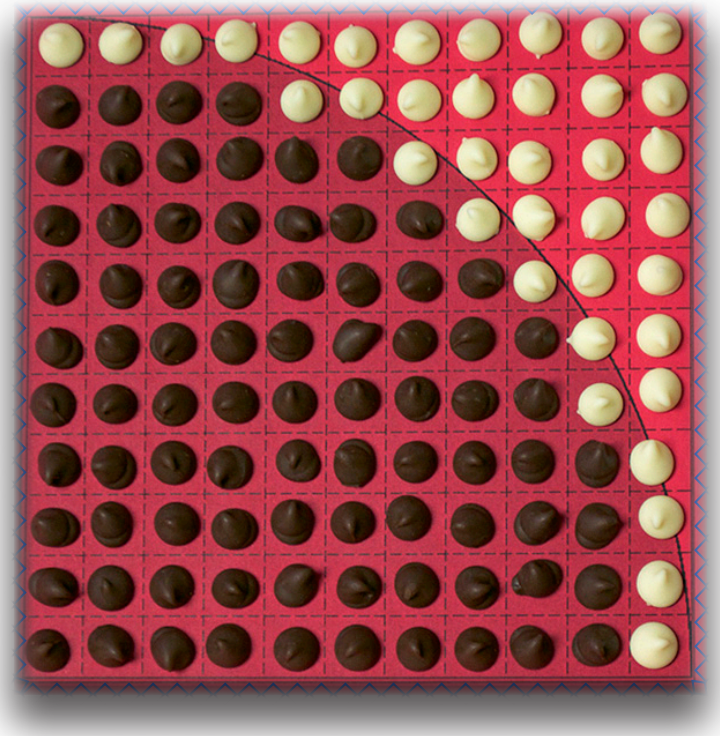


Bible Cross-References by Chris Harrison

The bar graph that runs along the bottom represents all of the chapters in the Bible. Books alternate in color between white and light gray. The length of each bar denotes the number of verses in the chapter. Each of the 63,779 cross references found in the Bible is depicted by a single arc - the color corresponds the distance between the two chapters, creating a rainbow-like effect. More detailed information on Chris website.

OF INTEREST

Mathematical treat(s) for the Holiday



How can a kiss help us learn Calculus?

...We will indeed use a kiss to motivate a central idea of Calculus, but it will be a Hershey kiss! An 11 by 11 grid of chocolate chips. If you count carefully, we use 83 milk chocolate chips of the 121 total. This gives us an estimate of 2.7438 for π, which correlates to an error of about 0.378. More on the process at **Math Movement**...

Do French have a strange fetish for the number 20?

Teachers in France in all subjects, even sport, grade students out of 20, as does the school-leaving baccalauréat. The French language uses 20 as a base for counting between 70 and 100; hence 80 is quatre-vingts ("four-twenties"). Paris has 20 arrondissements, or boroughs. The capital's annual running race is the 20 Kilomètres de Paris. There is a free newspaper called "20 minutes". Even the main French television news is the Journal de 20 heures (the eight-o'clock news). Jean-Pierre Bourguignon, director of the Institute of Higher Scientific Studies, says numbers like 12 and 60 are more interesting, because they have more divisors. The vigesimal system (counting in base 20) is thought to originate from humans' fingers and toes. It was used by the Mayans as well as by Celts and in other parts of Europe in the Middle Ages. In old French, 40 was deux-vins.

The French began to move to base ten in the 16th century; the metric system was first adopted in 1795. Yet traces of the vigesimal system linger, says Bernard Helffer, president of the Société Mathématique de France. The Fifteen-Twenty eye hospital in Paris still keeps its name. Founded in the 13th century, it was named for its 300 beds. The system of grading out of 20 in schools was introduced as recently as 1890. Whatever the origins of this curious French obsession, it has nothing to do with another Gallic passion: it just happens that, when spoken, the word for twenty (vingt) sounds exactly like the word for wine (vin). (© Courtesy of The Economist.)

©2010 2011 European Society for Mathematics and Art. 11 rue Pierre et Marie Curie, 75231 Paris Cedex 05. FRANCE. **Claude Bruter**, Publisher. **Jean Constant**, Editor. Contributors: Sharon Breit-Giraud, Richard Denner, Andreas Matt, Elvin Rottaker, François Tard. Illustration RSC Publishing. Design, Hermay CSV Information, contact: info@mathart.eu Website: www.mathart.eu

**Editor's note:*

ESMA is a Non-Political, non partisan and non discriminatory organization.

At the request of the author and to avoid any misinterpretation regarding his intent, the sentence relating to - federal - commonly defined in the Merriam-Webster dictionary as: [quote] Federal - 1) pertaining to or of the nature of a union of states under a central government distinct from the individual governments of the separate states 2) of, pertaining to, or noting such a central government: federal offices…. has been moved back to the original text as submitted.

The author has been kind enough to send us additional clarification regarding his statement:

…Le fédéralisme implique concertation, respect d'autrui et bonne entente. Le centralisme est lié à une structure autoritaire, dictatoriale, dont on connaît les dérives….

We apologize to our readers for any inconvenience or misinterpretation of the author's intent it may have created.