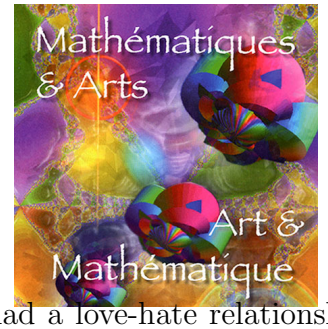
Art and Math exhibit
Institut Henri Poincaré, Paris
January - June 2005
Organized by Claude P. Bruter



The organization of this conference was opened on January 24 in the Institut Henri Poincaré in Paris.


Irène Rousseau,
Mosaique hyperbolique
©photo John Sullivan

Arts and sciences have always had a love-hate relationship. Hard core scientists are believed not to be sensible for organic beauty, and "real" artists are supposed to hate any constraint that may be imposed by the rigidity of a mathematical system.

However, since ancient history, mathematics has been an art and art has flirted with mathematical structures. Think of the golden section in ancient architecture, the work of Leonardo da Vinci, the magic square in Dürer's 'Melancholia', the hypercube in Dali's 'Crucifixion' (aka 'Corpus Hypercubus'), Escher's tessellations. And there is so much more. Think of the music by Bach but also the musical 'Fermat's Last Tango', the many math-related novels that were already reviewed in this newsletter, but also many science fiction novels, and stage plays like Auburn's 'Proof' and movies like Greenaway's 'Drawning by numbers' or 'A beautiful mind' of Ron Howard, and this list could be continued.



John Robinson,
Creation,
©photo John Sullivan

This is not an observation to be neglected. This can be used to the benefit of mathematics. Just note that if you find something about mathematics in a newspaper or if mathematics is (directly or indirectly) mentioned in the media, apart from Einstein or Fermat, then an image or a scupture or 'fancy pictures' are an efficient way to catch people's attention. Remember the success of fractals and the eye-catching Julia and Mandelbrot sets. And it seems that the popularization of mathematics is more and more interested in exploiting this link between mathematics and art.

The annual conferences on 'mathematics and culture', mainly embodied by Michele Emmer and coworkers resulted in best-selling books published by Springer. Thus it is not surprising that several organizations trying to promote mathematics are also involved in topics that are on the border of arts and mathematics. I just mention ISAMA[1] (The International Society of the Arts, Mathematics, and Architecture), IS-MCA[2] (International Society for Mathematical and Computational Aesthetics), ISIS[3] (International Society for the Interdisciplinary study of Symmetry), the Goudreau Museum of Mathematics in Art and Science[4], and Google will give a zillion more of these links.


Philippe Charbonneau,
Biconique 5
©photo John Sullivan

Claude Bruter has been interested in mathematics, art, visualization, education and the interplay between those. He organized a conference on this topic in Maubeuge (2000) and

[1] http://www.isama.org/
[2] http://www.rci.rutgers.edu/~mleyton/ISMA.htm
[3] http://www.mi.sanu.ac.yu/vismath/isis0.htm
[4] http://www.mathmuseum.org/

is editor of the proceedings: *Mathematics and Art*, Springer 2002. He is also the founder of ARPAM[5] (Association pour la Réalisation et la Gestion du Parc de Promenade et d'Activités Mathématiques).

An amazingly large number of artists and mathematicians were brought together in this exhibition. There are 5 participants who present themselves as an artist (usually with no specific mathematical education), there is an architect, a software engineer, and there are 10 mathematicians. The exhibits include sculptures, paintings, and often computer generated images or paintings inspired by them. The works of art by the mathematicians is most often the result of an attempt to visualise a certain process, just like the about 20 years ago the exhibition by Peitgen and his coworkers using the fractals and Mandelbrot sets.

For those who do not have the occasion to visit the exposition in the Institut henri Poincaré, let me mention that it will move to the Ecole Polytechnique from July to September 2005. And if you still can not go to Paris in that period, and for the impatient, you can have a look at the website `http://www.hermay.org/IHP`[6] or order the catalogue (48 pages) from the librarian of the Institute Poincaré Liliane Sweig `zweig@ihp.jussieu.fr`. Note however that several links of the web page do not work properly, but with some imagination, it is often possible to reconstruct the correct address.

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[5] `http://arpam.free.fr/`

[6] Hermay is a non profit organization for the promotion of art.