EUROPEAN SOCIETY FOR MATHEMATICS AND ART
NEWSLETTER

Dear Colleagues,

Charles Dickens wrote at the beginning of Oliver Twist's biography: "It was a considerable difficulty inducing Oliver to take upon himself the office of respiration." By chance, it seems that our newborn Society which is already one year old has not met such a serious obstacle in its first twelve months of existence. Will its future be as successful as its first year?
The future, of course, will depend on your care as its custodians, the circumstances of its environment and its own intrinsic qualities.

We can't expect ESMA to become instantly a prominent organization with a large membership. At this time, some 65 individuals from Europe and the US have shown various level of interest in our activities - which is not bad at all – although more due paying members would be a welcome relief to help carry all our programs.

Of course, from its very definition, one could anticipate ESMA to be one of the largest society of its kind in Europe or in the world. Don't we all know of the art of medicine, the art of speaking, the art of cooking, the art of divination, the art of living, and so on? Thus, we could expect all the top people on the planet to join ESMA too. Since many of us enjoy fine dining, opening the society to at least some well-known chefs could be gratefully appreciated!

But first and foremost, our organization is interested in the expression of mathematical art in terms of fine art, including music and architecture. To work as a mathematician is a full time commitment, to work as an artist is also a full time commitment. To be gifted enough to find time to produce meaningful works that are relevant in both fields remains rather exceptional. In recent centuries, there were only too few Leonardo da Vinci to remind us that the real Leonardo considered painting as a science: any prospective painter had to learn first mathematics and perspective. We do not expect that trend to change drastically in the near future.

The real question then is not the number of people who will join ESMA and their individual skills. The real question is what is the intellectual and social meaning of the institution?

I don't feel I am in the right position to give an unbiased opinion on the subject. We may only hope that reading its mission statement, an independent observer may find some better answers. The universal character of mathematics and arts, the geopolitical psychology of our present setting justify in part the international goal of ESMA. It is a humanistic consideration hopefully shared by most of ESMA members and it is also the cement of the organization.

CONTENTS

European Society for Mathematics and Art Newsletter. Volume 002 - Issue 001, January 2011

Continued from Page 1

Unfortunately, many have often only a parochial view of their historical, geographical, political and social circumstances. It leads sometime to individualistic behaviours and erroneous judgments. The emergence of ESMA on the international scene and its activities may encounter some difficulties here and there. Individuals having acquired an open minded and cultivated background are rare. Many for instance have been questioning the link between mathematics and art. Indeed, we cannot reproach entirely to most, caught with their daily work as medical doctors, engineers, administrators or politicians to be ignorant of these links. Acceptance of a society like ESMA by other institutions is not obvious.

To add to it, the geographical fragmentation of its membership and the financial constrains of the organization prevent holding regular meeetings and warm socials where the bonds of friendship can be put to the service of professional consideration.

Thus, it is not an easy task to set up the machinery of such an institution and to make it work.

Anyway, there are several reasons for keeping ESMA alive. The mathematicians Jacobi or Dieudonné would have said " To the honour of the human spirit" : a quote that evokes solitude and nobility. It is I guess the fate of any creation in Nature, a fate that we have to face as far as our strengh and energy support us.

I wish you an active and serene year.

Claude Bruter

P.S. The Society always appreciate your donation or early payment of your 2011 membership dues: (BIC or SWIFT : CEPAFRPP751, IBAN: FR76/1751/5006/ 0008/0001/8634/606). ESMA, c/o IHP, 11, rue Pierre et Marie Curie, 75005 Paris Cedex 5.

ANNOUNCEMENT

Benno Artmann from the Göttingen Mathematisches Institut passed from an heartstroke on October 14. He was one of our first member and donor.

His writing on mathematics and art and some of his own artistic creation are available in the ESMA site Resource Center and Gallery pages. Two of his beautiful works were shown in the recent ESMA exhibition at the IHP.

His wife, Maresia, sent us the sad news on December 20. We sent her the organization's best thoughts on behalf of its members and colleagues.

ACTIVITIES

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

January 6- 9, 2011. Joint Mathematics Meetings Exhibition. New Orleans. ESMA members participating in the exhibit: **Cristina Besa, Francesco de Comité, George Hart, Vi Hart, Slavik Jablan.**

Jan 14, 2011. Maths & Perspectives. **Université du Temps Libre** Essonne. France. Lecture by **Claude Bruter.**

January 27 - February 13, 2011. Jeremie Brunet. Exhibit. Fractal works on aluminium & acrylic support. Gallery Rips, 16 rue Jacquemont Paris 75017. For more information: Philippe Rips, Jeremie Brunet.

On Going - 2011 IMAGINARY exhibitions in Spain (2011 and 2012) Organized and coordinated by the Royal Spanish Society of Mathematics (RSME). **On-going.** ESMA has been accepted as a European Commission Interest representative. Information relative to the EU, its scientific, cultural and artistic activities can be found at Europa.eu

On-going. Organizations now officialy associated with ESMA: ARPAM, ARS MATHEMATICA, IHP, SYMMETRY, LIFL

ESMA - website statistics for November 2010: 888 unique visitors. 1059 numbers of visits. 2375 pages visited: Bruter - Saverne (291) Newsletter (153) Calendar (70)

RESOURCE CENTER

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

- **Jeremie Brunet.** Fractal gallery created with the software Mandelbulb (Gallery, ESMA members)

- **Mandelbulb 3D.** Window only software to generate 3D views of different fractals (Resource, Mathematics and Art)

GALLERY

Fractal 23 by Takeshi Miyakawa
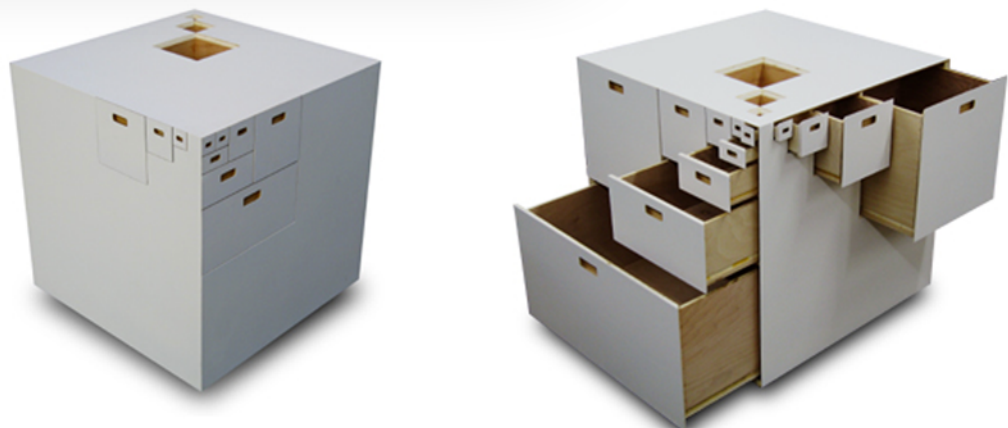
Miyakawa's Fractal 23 is an innovative design that falls between furniture and sculpture. Taking inspiration from the geometric intricacies of fractals, Miyakawa stacked drawers of diminishing sizes on each side of a cube-shaped chest, utilizing most of its room. Whatever space left is utilized as containers carved out on the top. Interestingly, Miyakawa completed his design without the use of computer modeling.

MATHEMATICS & THE ART OF POLITICS

"**Numbers Rule**: The Vexing Mathematics of Democracy, from Plato to the Present" (Princeton; $26.95)
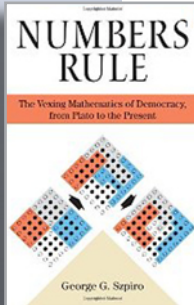
*F*or five hundred years, from 1268 until the end of the Venetian Republic, thirty electors were chosen by lot, and then a second lottery reduced them to nine, who nominated forty candidates in all, each of whom had to be approved by at least seven electors in order to pass to the next stage. The forty were pruned by lot to twelve, who nominated a total of twenty-five, who needed at least nine nominations each. The twenty-five were culled to nine, who picked an electoral college of forty-five, each with at least seven nominations. The forty-five became eleven, who chose a final college of forty-one. Each member proposed one candidate, all of whom were discussed and, if necessary, examined in person, whereupon each elector cast a vote for every candidate of whom he approved. The candidate with the most approvals was the winner, provided he had been endorsed by at least twenty-five of the forty-one.

No voting system is flawless. But some are less democratic than others. George Szpiro, a journalist and mathematician, review in mathematical terms the effort of great minds such as Plato, Pliny the Younger, Ramon Llull, Pierre Simon Laplace, Thomas Jefferson, Alexander Hamilton, John von Neumann, Kenneth Arrow and the Marquis de Condorcet among many. Szpiro explains how mathematical paradoxes and enigmas can crop up in virtually any voting arena, from electing a class president, a pope, or prime minister to the apportionment of seats in Congress. *(Anthony Gottlieb)*