FOREWORDS   ACTIVITIES   RESOURCE UPDATE   GALLERY

Dear Colleagues,

We can all imagine that geometry did not arise only from land measuring problems, as Herodotus wrote. Nevertheless, it can be said that Architecture occupies an important place among the arts associated with Mathematics. Mastaba and pyramids are among the oldest monuments constructed by mankind. The oldest known mastaba is around 5000 years old. It is close to a parallelepiped in shape while some vertical sections seem to be trapezia. Such a structure could not have been carried out without at least a minimal knowledge of arithmetic and geometry. It is most likely that the construction of these ancient monumental tombs contributed to the development of early mathematics. This hypothesis is supported by findings in the earliest mathematical texts.

It seems that some geometers with like sensitivity have shared the same view of mathematical construction. A famous paper entitled "L'Architecture des Mathematiques" was written by Bourbaki, the authors most likely being Henri Cartan and J. Dieudonne. Recently, Sir Michael Atiyha also expressed his view of mathematics as architecture. I believe that the mathematician Hermann Weyl, whom I admire, would have agreed with this as well.

It is therefore not entirely unexpected that some architects involved with mathematics, who may also be mathematicians involved with architecture, might find the idea and the conception of the Arpam project attractive. This is the case in Russia and in Kazakhstan, where the project is being promoted by two architect-mathematicians, respectively Dmitri Kozlov and Saken Narynov.

ARPAM is an ESMA member institution. As such, ESMA members may help ARPAM and contribute to the project. Its intent is to offer the public physical and visual beauty in addition to the beauty of the mind and intelligence. In the words of the French physicist, Hubert Curien, it would tend to reconcile the public with mathematics.

CONTENTS

A word concerning the manner in which the Newsletter is produced. I first send my text to a translator. The improved version then goes to the Editor, who is in charge of the rest of the Newsletter. His team collects the information and selects the items which they feels to be most pertinent, a tremendous job indeed. Any assistance in this endeavor would be greatly appreciated!

Among the news items concerning the life of the Society, one item is particularly significant. That is the 2012 ESMA Conference in Berlin, organized by Konrad Polthier. It is planned for August 2012. The precise date has yet to be decided. Contributions might be sent for review before the end of May. The ESMA board can help anyone who is unfamiliar with writing papers for the Proceedings.

My best wishes for the New Year!

Claude P. Bruter

P.S.. As in most scientific societies, such as the SMF, the MAA or the AMS, the first call for contributions for the year n + 1 appears in November or December of the year n. If, after the first call, ESMA receives dues from someone who has not yet paid for the year n, the corresponding amount is considered only as the year n dues. Exception is made for first-time members.

ANNOUNCEMENT

Announcements relating to Science and Art activities. To be listed in this column: info@mathart.eu

January 15, 2012. Shape Modeling International will be held on 22-25 May in College Station, TX. As one of the four tracks of the conference, SHAPE FABRICATION & SCULPTING PAPERS will focus on shape modeling, fabrication, and sculpting methods. Submission deadline: Jan. 15, 2012. Call for papers: http://smi2012.viz.tamu.edu/12.shtml Submission: http://smi2012.viz.tamu.edu/22.shtml

January 20, 2012. NanoArt 21. Exhibition at NanoIsrael 2012, in March, at the InterContinental Hotel in Tel Aviv. The exhibit will also be touring local universities. Deadline to apply: January 20, 2012. More information at **NaNoArt21**

March 16, 2012. The Contemporary Art Fund of the City of Geneva (FMAC) is launching an call for applications to create an artistic work in the context of the construction of a school and public complex comprising a school, with a gymnastics room and a swimming pool, a children's play area, a multi-purpose room and high quality public space. Information, conditions, regulations and inscriptions on: **Contemporary Art Fund of the City of Geneva**

March 30, 2012: CHAOS 2012. 5th Chaotic Modeling and Simulation International Conference, Athens, Greece, 12-15 June 2012. Abstracts and Proposals submission: **CMSIM.**

On-going: IAIA. The Institute of American Indian Arts is accepting submissions for digital dome projects to be exhibited during the Santa Fe International New Media Festival – June 22 thru July 8, 2012 in Santa Fe, New Mexico, USA. The selected work will be screened at the Digital Dome @ IAIA housed in the new Science and Technology building at the Institute of American Indian Arts. More information at **IAIA**

ACTIVITIES

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

20. Dec.. 2011 – 27. Jan. 2012 IMAGINARY, Valencia Spain. IMAGINARY is the interactive travelling exhibition of the Mathematisches Forschungsinstitut Oberwolfach. The Spanish IMAGINARY exhibitions are hosted and organized by the Royal Spanish Society of Mathematics (RSME).

February 1-17, 2012. Mathematics and Art exhibit. Paris, District V City Hall. 11:00 Am - 6:00 PM. Opening: Tuesday January 31, 6:00 PM -7:30 PM followed by a commented tour presentation. ESMA members and guests welcome.

RESOURCE CENTER

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

Claude Bruter: *Bonne Annee.* Notes from a joint lecture by C. Bruter and J. Leys at the Oeben Middle School College, Paris, Dec. 12, 2011. FR. only. *(Resource center, General Interest, media).*

Jos Leys: *M.C. Escher et les ordinateurs.* Power Point presentation. FR. & EN. *(Resource center, General Interest, media).*

GALLERY
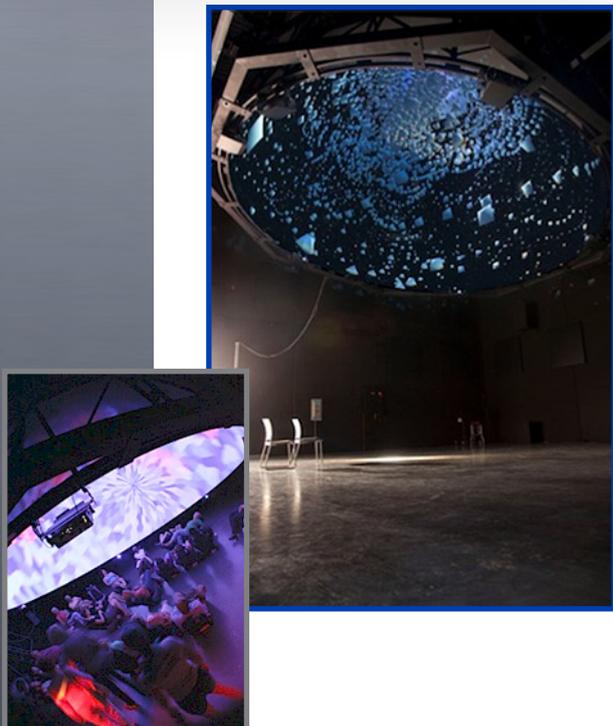
*Calendar of activities at the Digital Dome is available on the IAIA & Dome director **Ethan Bach** websites*

Digital Dome

The Digital Dome @ IAIA offers a unique combination of black box, planetarium, fulldome, and the world's only full range articulating dome. The dome structure weighs 8,000 pounds, hangs from the ceiling, and can rotate 0° to 90° or can be place near the ceiling or the floor. This immersive, high-resolution environment is created by a 24-foot wide spherical screen, six projectors, and a 6.1 surround sound system. The Digital Dome @ IAIA is involved in ground-breaking research funded by the National Science Foundation for the fulldome, including the ability to display interactive content. Historically geodesic theaters have been used for exploring the stars in the planetarium. It is not until recent years that these theaters have become capable of presenting digital media. With over 600 digital domes around the world, the content being produced and shown is primarily science based. This innovation brings new life to the medium providing artists an endless amount of opportunities for creation. The Institute of American Indian Arts in Santa Fe has quickly become a leader in opening up the spherical theater for artistic exploration.
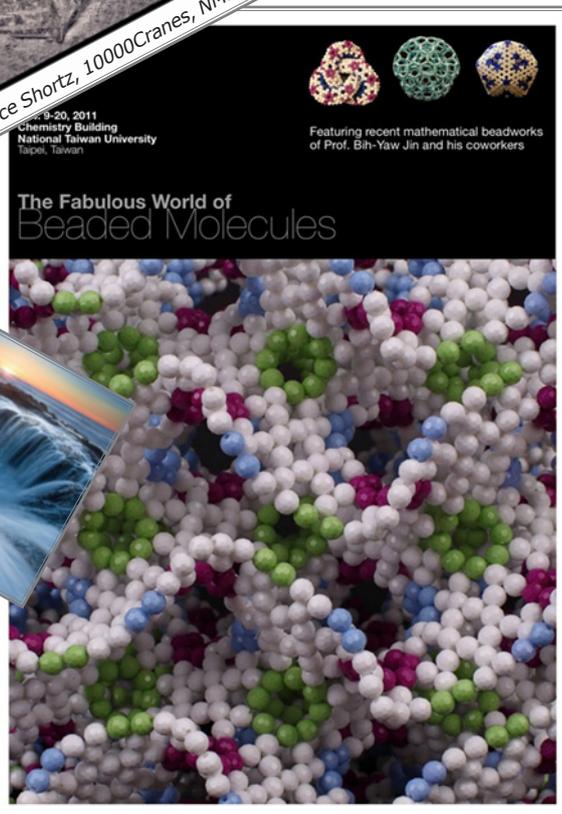
OF INTEREST

ESMA members and supporters were busy exchanging "mathematical "greetings with each other and us over the Holidays! On behalf of the Newsletter staff and the artists represented here, we would like to extend to you our very best wishes for 2012.
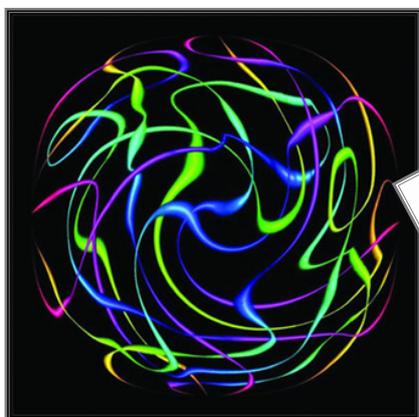
Slavik Jablan, Mathematical Institute, Belgrade.

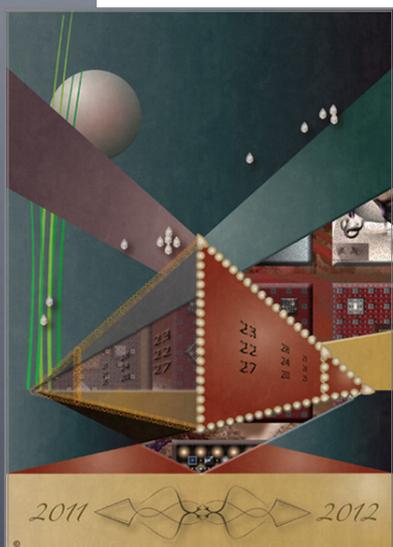

Bruce Shortz, 10000Cranes, NM.
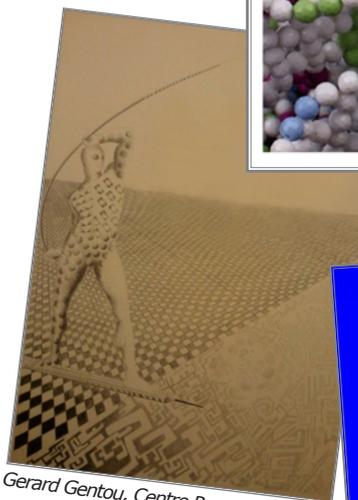

Jin Bih-Yaw, National Taiwan University, TW.

Roger Guillemin, SAKS Institute, CA.

Gilles Millinaire, PHC, NM.

Jean Constant, Media Institute, Chernex, CH.

Gerard Gentou, Centre Pompidou, Paris.

Christian Lavigne, ARS MATHEMATICA, FR.