



European Society for Mathematics and the Arts

Newsletter

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Dear All,

The publication of the second ESMA Conference will take some time due to various delays. We have to be patient given the different kinds of administrative constraints encountered by our our partners.

So, in the present world, we need a lot of humour and some philosophy to overcome all these difficulties. To read again authors like Seneca or Montaigne (his Essais or How to live or a life of Montaigne in one question and twenty attempts at an answer by Sarah Bakewell) might help, more joyful writers as well. An other way is to evacuate one's sad thoughts through creation.

In that direction, some artists, using broken mathematical shapes, might renew with the satiric and harsh atmosphere expressed by some predecessors such as Jérôme Bosch and Pieter Bruegel. But like these artists, they can also use deformations to create powerful and fascinating effects.

Deformation is a general fact tied to movement, change, which can be very local with respect to any parameter attached to the moving object. It is a universal concept which of course is present in mathematics. In that field, when considering some special situations, it may, for instance, appear under the names of homeo-morphism or homotopy. But the use of these technical words by non-specialists might have a tendency to hide the general presence of the activity of deformation, a term everybody understands.

Indeed, even pupils should be made more familiar with the concept and the word. Excellent and fruitful exercise for many reasons: think of all the deformations of a triangle that you can make, and in each case look at the properties of the modified triangle.





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The use of deformation in plastic art will be here illustrated by the photographs of three different types of recent sculptures shown underneath. The first one was taken in the park of the Weizman Institute in Rehovot: it is only a twisted ribbon. You could think of other deformations and make «original» works.

The second list of sculptures is exhibited in a Parisian gallery. The photos come from a French journal devoted to art exhibits. The paper comments these works saying they are «attractive Möbius bands», therefore deformations of the standard mathematical one. There is no word on the reasons why and where they have really been produced. From the mathematical point of view, John Sullivan's minimal flower (see our catalogue on page 53) is much more rich and interesting.

The last sculpture stands close to the entrance of the Groeningemuseum in Bruges (Belgium) - which offers visitors a beautiful exhibition of the Flemish Primitives. This solid sculpture in marble has three holes and, from the mathematical point of view, its surface is an interesting Riemannian surface of genus 3.

Other examples of deformations by Francesco De Comite will appear in the next Newsletter.

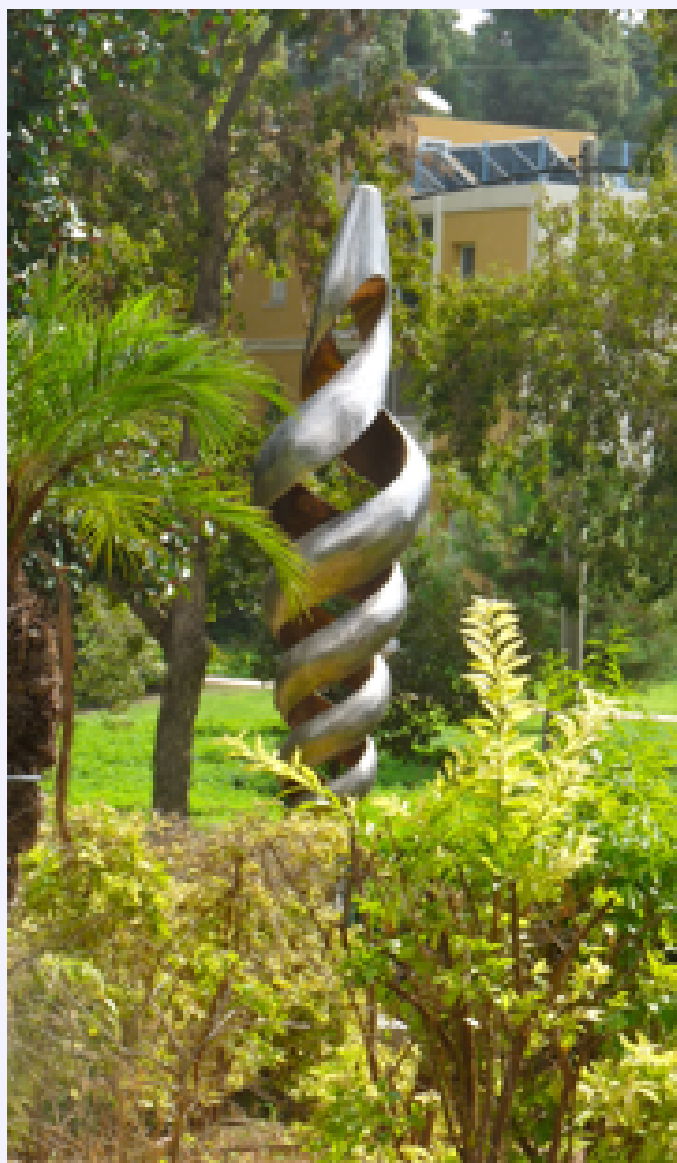
One can find here and there some local exhibits where some artists show works based on rather elementary mathematics. The titles of these exhibits do have a poetic appeal, so that they are easily accepted by literary organizers. The term «mathematics» continues to have a negative effect on standard decision-makers. It remains rather difficult for us to reach the general public.

Regarding even the mathematical communities, where members' minds are rather closed inside the technical world of their activities, the role and the use of exhibits are not always well understood. The openness of the Mathematical American Association is an exception. People interested in math and art should follow the activities of the SIGMAA on Mathematics and the Arts <http://sigmaa.maa.org/arts/>.

Last but not least, the next ESMA conference will take place in Ljubljana, Slovenia, in 2016 !

*Best wishes,
Claude*





In the park of the Weizmann Institute



up: Blue Triple Twisted Yellow Loop (2014)
(2014)

down: Orange Triple Twisted Red Loop (2014)
(2014)

M. Rasmussen



Before the Groeningemuseum in Bruges

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