European Society for Mathematics and the Arts

Newsletter

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Dear All,

I shall begin this letter by a new call for dues and donations. Though many people around the world are looking at our website, I dare not tell how many of them accepted to pay their dues this year. An exhibition in an important mediatic place had to be cancelled due to lack of money. Instructions to contribute to our activities appear on http ://www.math-art.eu/adhesion.php.

For reasons of stability or otherwise said, of permanence through space and time, one of the most fundamental activities of living beings, including the vegetable reign is to set up, to develop, and to use various ways to obtain information concerning their surroundings, in other words to succeed in getting the best representation of their environment. Representation is indeed one of the most important common features of Art and Math. Regarding mathematics, in many cases, the mathematical terms «function», «mapping» and «projection» could be advantageously replaced by «representation».

The representation of an object allows us to have a look at only some features of that object. Unfortunately, the mind has a tendency to identify the representation, the symbol, with the source object. As the great physicists Thomson and Tait wrote in the Preface of their Treatise on Natural Philosophy : «Nothing can be more fatal to progress than a too confident reliance on mathematical symbols ; for the student is only too apt to take the easier course, and consider the formula and not the fact as the physical reality». In other words, we should not confuse fact and formula. Such a confusion induces errors of judgement, and could have catastrophic consequences. In some sense, Islamic art which forbids representing the deep unknown is a wise application of our physicists'advice. Platonic mathematicians should praise this abstract quasi mathematical form of art.

Using mathematical art as a pedagogical support, some lectures of initiation into contemporary mathematics recently occured in France for school children during the «Week of

Mathematics» (March 17-23)

https ://www.ac-paris.fr/portail/jcms/p2_873860/semaine-des-mathematiques-2014.

Jos Leys accepted to create the following two animations :

http ://www.josleys.com/gfx/Danse_03.mov
http ://www.josleys.com/gfx/DanseNDT_01.mov

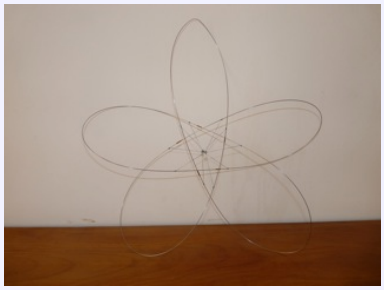
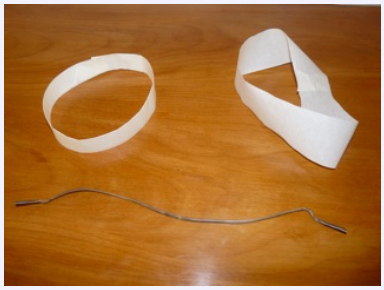
where he introduced legos instead of dancers - boys did like theses figurines. Among other concepts and data, these short animations in particular illustrate, using simple striking images, the fact that we should be aware not to take the shadow as the prey. From a psychological point of view, this kind of mathematical image, easy to memorize, could be a very efficient way to imprint the lesson into the mind.
I put on line some considerations attached to the content of these lectures («Suggestions pour une familiarisation attractive avec les mathématiques daujourd'hui» - an English version should appear soon). The content was written without any preconceived idea. It can eventually be changed into a more organized and didactic form according to the circumstances. And of course quite different contents can be conceived.
The use of the Dmitri Kozlov and Philippe Rips knots (see below) whose deformations are a joyous surprise for the children, and the musical end given by

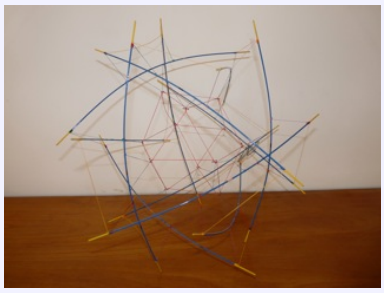
www.josleys.com/Canon/BachCanonL_final.mov

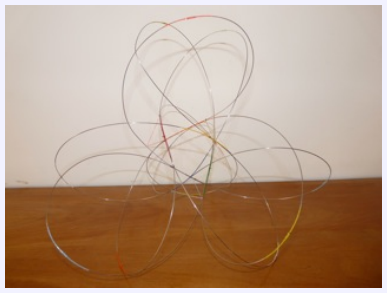
insure the success of the lectures.

The unfortunate difficulties encountered in the relations between several countries do not allow us to give out information on the realization of the Arpam project. The main fact is that our partners and ourselves share the same goals and ethics as they appear in the statutes of our associations. The shared mutual help will overcome the local difficulties.

Best wishes,
Claude





Knots realized by Philippe Rips and Dmitri Kozlov

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