



European Society for Mathematics and the Arts

Newsletter

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Dear Reader,

The next ESMA conference (Ljubljana 19-23 Sept. 2016) will give us the opportunity to have a new large exhibition.

New artworks will be particularly welcomed. If you intend to show some of them please inform the organizers (mateja.budin@gmail.com, bruter@u-pec.fr) as early as possible in order to prepare a catalogue in time.

The main themes of the conference are the same as those of the Cagliari conference:

- *Mathematical tools and software for the creation of artistic scientific visualizations*
- *Analysis of artistic/mathematical works from the mathematical/artistic point of view*
- *Pedagogical uses of scientific artistic works.*

Contributors are invited to send: a first abstract before January 30/2016, their full paper before June 15/2016, to any member of the scientific committee:
francois.apery@uha.fr, banchoff@math.brown.edu, bruter@u-pec.fr, andrej.bauer@andrej.com, mateja.budin@gmail.com, renzo.caddeo@unica.it, mikefield@gmail.com, gregorio.franzoni@unica.it, kozlov.dmitri@gmail.com, palais@uci.edu, sullivan@Math.TU-Berlin.DE.

Günther Bachelier is organizing a «periodical programming competition involving Mathematics, Machine Learning and Visual Arts » - for instance look at :

<http://www.tilingsearch.org/>

http://de.evo-art.org/index.php?title=Exploring_a_Design_Space_for_Patterns_and_Tilings_Competition_2015

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<https://www.flickr.com/photos/gbachelier/collections/72157645237636739/>.

We hope that some competitors in pattern and tilings creation will attend the Ljubljana conference.

The construction of spiraling towers of tetrahedra by Joseph Shevelev http://ishevelev.ru/files/to_print_English.pdf may also inspire some contributors. His esoteric philosophy is typically Pythagorean. Numbers and proportions play an out-standing role, in particular those arising from the standard Pythagorean theorem.

Considering two rectangular triangles \mathcal{N} and \mathcal{C} with the same hypotenuses $(N^2 + N'^2) = (\theta^2 + \theta'^2)$, generalized «golden» proportions and numbers appear : $(N + \theta)/(N' + \theta') = (N' - \theta')/(\theta - N)$ in particular when $\theta = \alpha\sqrt{5}$ and $\theta' = \beta\sqrt{5}$.

Other polyhedral creations were made by Albert Carpenter: (<https://polyhedron100.wordpress.com/>), while Hamid Neganeh used crosshatchings to create finely woven veils <http://blogs.scientificamerican.com/symbiartic/mathematically-precise-crosshatching/>

Note that “Mathematics and Art III, *Visual Art and Diffusion of Mathematics*” will appear around September 15.

Best wishes,
Claude

P.S. Explore and enjoy:

<https://plus.google.com/u/0/108557640546882398221/videos?cfem=1>

Claude Bruter, Publisher. Contributors: François Apéry, Günther Bachelier, Sharon Breit-Giraud, Albert Carpenter, Richard Denner, Jos Leys, Hamid Neganeh, Joseph Shevelev.

Website: <http://www.math-art.eu>

