

New Tools for Mathematics and Art call for papers International Journal of Arts and Technology

Guest Editors: Prof. Dr. Ir. Loe Feijs and Dr. Jun Hu, Eindhoven University of Technology, The Netherlands

Subject Coverage:

- . new tools for exploration and conceptualisation
- . new output modalities, devices and interactions
- . contemporary art works based on mathematics and new technology
- . advances in mathematics based on art and new technology
- . new tools for dissemination and exhibition
- . visions on the future of mathematics and art
- . historic case studies on technologies

New tools for Mathematics and Art

There exist deep connections between mathematics and aesthetics. Some of these connections have been explored already in ancient times, for example the decorative tessellations in the Alhambra and the discovery of harmonic relations in music by Pythagoras. But art is more than aesthetics; it also makes personal and social statements. For example, the geometric principles of Bauhaus and DeStijl go hand in hand with positions about purity in art and about social transformation.

The theory of symmetries, i.e. invariance under transformations, has been powerful both in mathematics and in art. Traditional tools have included pencils, rulers, 3D modelling materials. However, with the advent of digital technologies everything has changed, both in mathematics and in art. Mathematicians now have visualisation software, equation solvers, proof checkers, and on-line journals.

Artists now have digital drawing tools, 3D printers, sensors, electronic displays, and on-line exhibitions. The question of how digital tools are revolutionising mathematical art is most interesting. New things can happen now which were impossible until recently.

More exciting new things are underway. It is the theme of this special issue to report the breakthroughs in the intersection of art and mathematics.

important dates

December 26th, 2009
Deadline for camera-ready papers

September 27th, 2009
Review results returned to authors

June 27th, 2009
Deadline for full paper submission