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Claude Bruter *Editor*

Mathematics and Modern Art

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The link between mathematics and art remains as strong today as it was in the earliest instances of decorative and ritual art. Arts, architecture, music and painting have for a long time been sources of new developments in mathematics, and vice versa. Many great painters have seen no contradiction between artistic and mathematical endeavors, contributing to the progress of both, using mathematical principles to guide their visual creativity, enriching their visual environment with the new objects created by the mathematical science.

Owing to the recent development of the so nice techniques for visualization, while mathematicians can better explore these new mathematical objects, artists can use them to emphasize their intrinsic beauty, and create quite new sceneries. This volume, the content of the first conference of the European Society for Mathematics and the Arts (ESMA), held in Paris in 2010, gives an overview on some significant and beautiful recent works where maths and art, including architecture and music, are interwoven.

The book includes a wealth of mathematical illustrations from several basic mathematical fields including classical geometry, topology, differential geometry, dynamical systems. Here, artists and mathematicians alike elucidate the thought processes and the tools used to create their work.

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