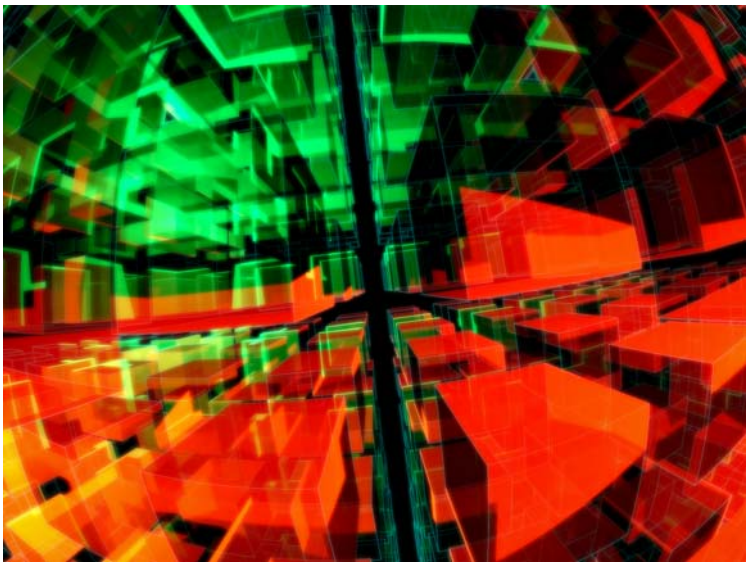
Journey into the Language of the Universe

CHAOS and ORDER

A Mathematic Symphony

Produced by Rocco Helmchen and Johannes Kraas

Distributed by
Loch Ness Productions



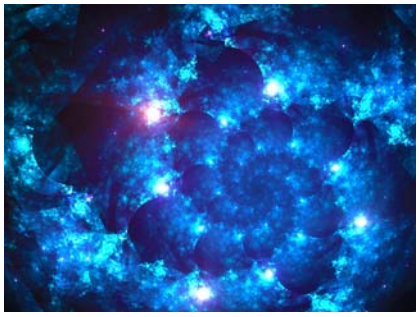
Chaos and Order - A Mathematic Symphony

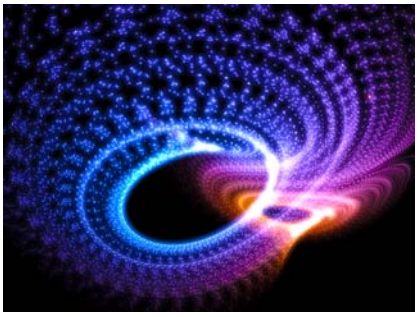
Journey into the Language of the Universe!

"The Universe is made of math."
— Max Tegmark, MIT Physicist

Does mathematics have a color?

Does it have a sound?

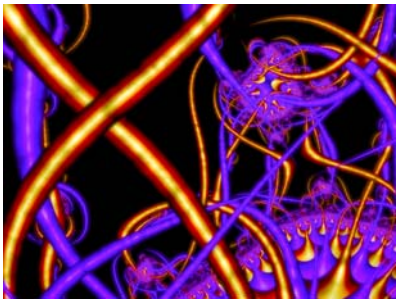




Media artist Rocco Helmchen and composer Johannes Kraas try to answer these questions in their latest educational/entertainment full-dome show ***Chaos and Order - A Mathematic Symphony.***

The show captivates audiences by taking them on a journey into a fascinating world of sensuous, ever-evolving images and symphonic electronic music.

Structured into four movements — from geometric forms, algorithms, simulations to chaos theory — the show explores breath-taking animated visuals of unprecedented beauty.



Experience the fundamental connection between reality and mathematics, as science and art are fused together in this immersive celebration of the one language of our universe.

Visualizations in *Chaos and Order - A Mathematic Symphony*

1st Movement - Form	2nd Movement - Simulation	3rd Movement - Algorithm	4th Movement - Fractal
Mesh cube Static cube-array Symmetry: Kaleidoscope Voronoi diagram Platonic solids: Hexahedron Tetrahedron Octahedron Icosahedron Dodecahedron Dynamic geodesic sphere-array Dynamic cube-array 5-ring Borromaen knot Geodesic sphere Gyroid minimal surface Spiral surface Clebsch diagonal cubic surface	N-body simulation Simulated galaxy-superstructures Rigid-body dynamics Fluid dynamics Boids flocking simulation Boids flight tracks Viscoelastic fluid Thermodynamics Gravity-set simulation Light-gravity simulation N-body simulation: galaxy collision	Belousov-Zhabotinsky cellular automata Evolutionary genetic art Diffusion-limited aggregation (3D) Coupled cellular automata Cycloid Diffusion-limited aggregation (2D) Rabinovich-Fabrikant equation Reaction-diffusion system: Ginzburg-Landau model Reaction-diffusion system: Turing model Lorenz attractor	Mandelbrot set Secant Fractal Escape Fractal Iterated function system: Recursive fractal flames Mandelbulb Fractal Mandelbox Fractal Newton Fractal Menger sponge

Running time: **29**, **40**, or **51** minutes Year of production: **2012**
Suitable for: **General public**
Information about: **Mathematical visualizations, fractals, music**

Public performance of this show requires the signing of a License Agreement.

Chaos and Order - A Mathematic Symphony

MOVIE SIZE	RESOLUTION	1-YEAR LICENSE	PRODUCT CODE	50-YEAR LICENSE	PRODUCT CODE
SMALL/MEDIUM	single channel, smaller than 2000 pixels	$3,000	ROC1-S1	$4,900	ROC1-S
LARGE/X-LARGE	single channel, larger than 2000 pixels	$8,125	ROC1-L1	$10,550	ROC1-L
SLICED	multiple channels, pre-sliced	$11,500	ROC1-G1	$14,950	ROC1-G

PRICES INCLUDE encoding/formatting and slicing for most fulldome systems. Contact us for details.

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