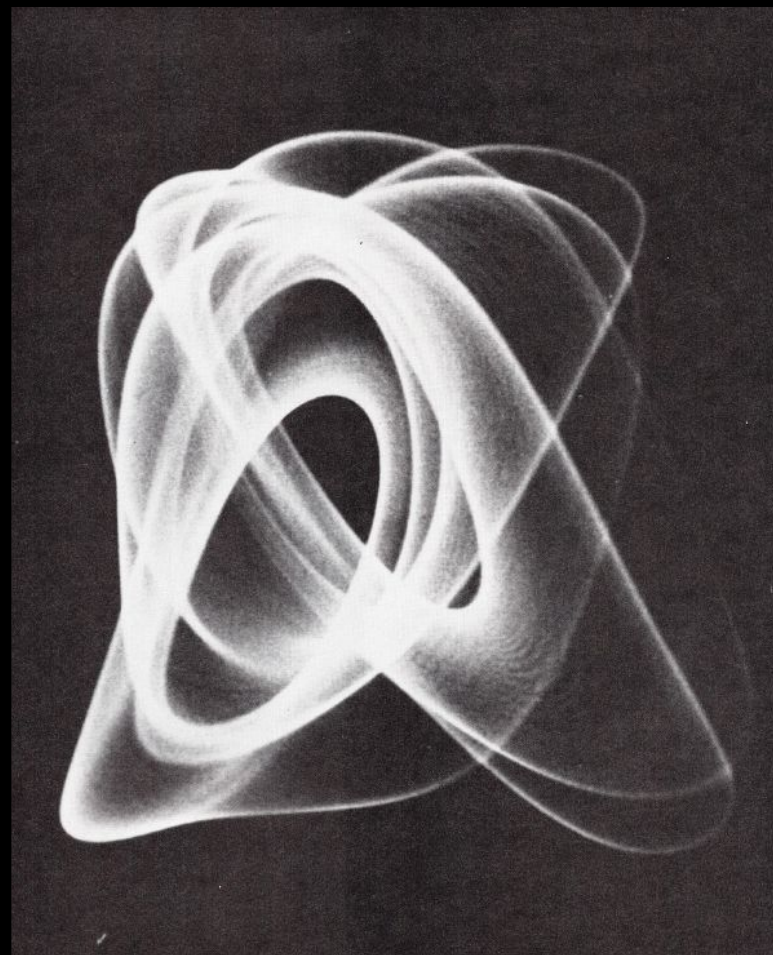
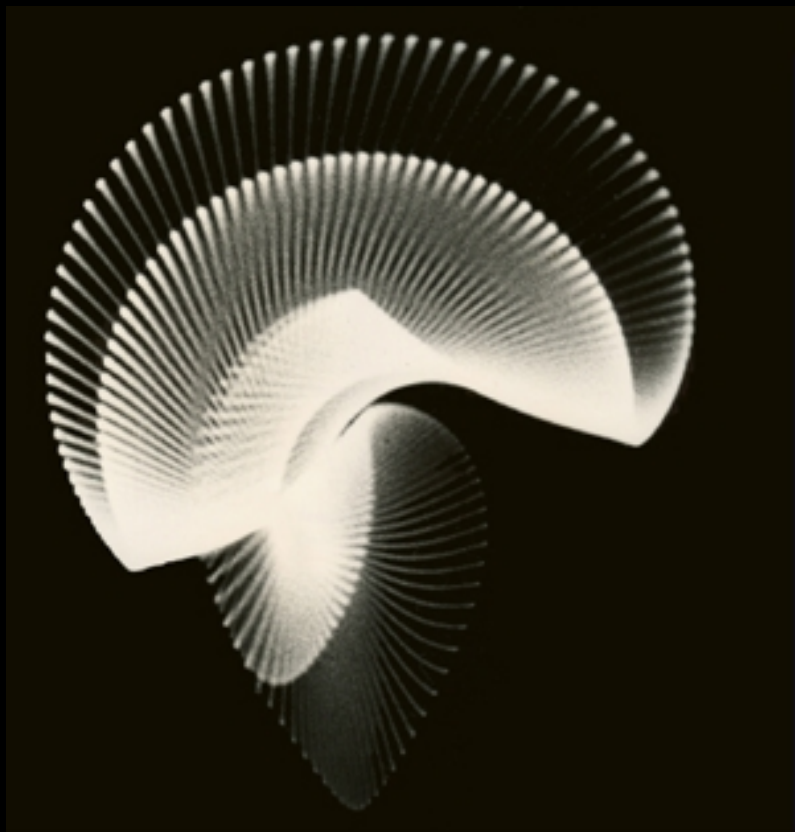


POČÍTAČOVÁ KREATIVITA

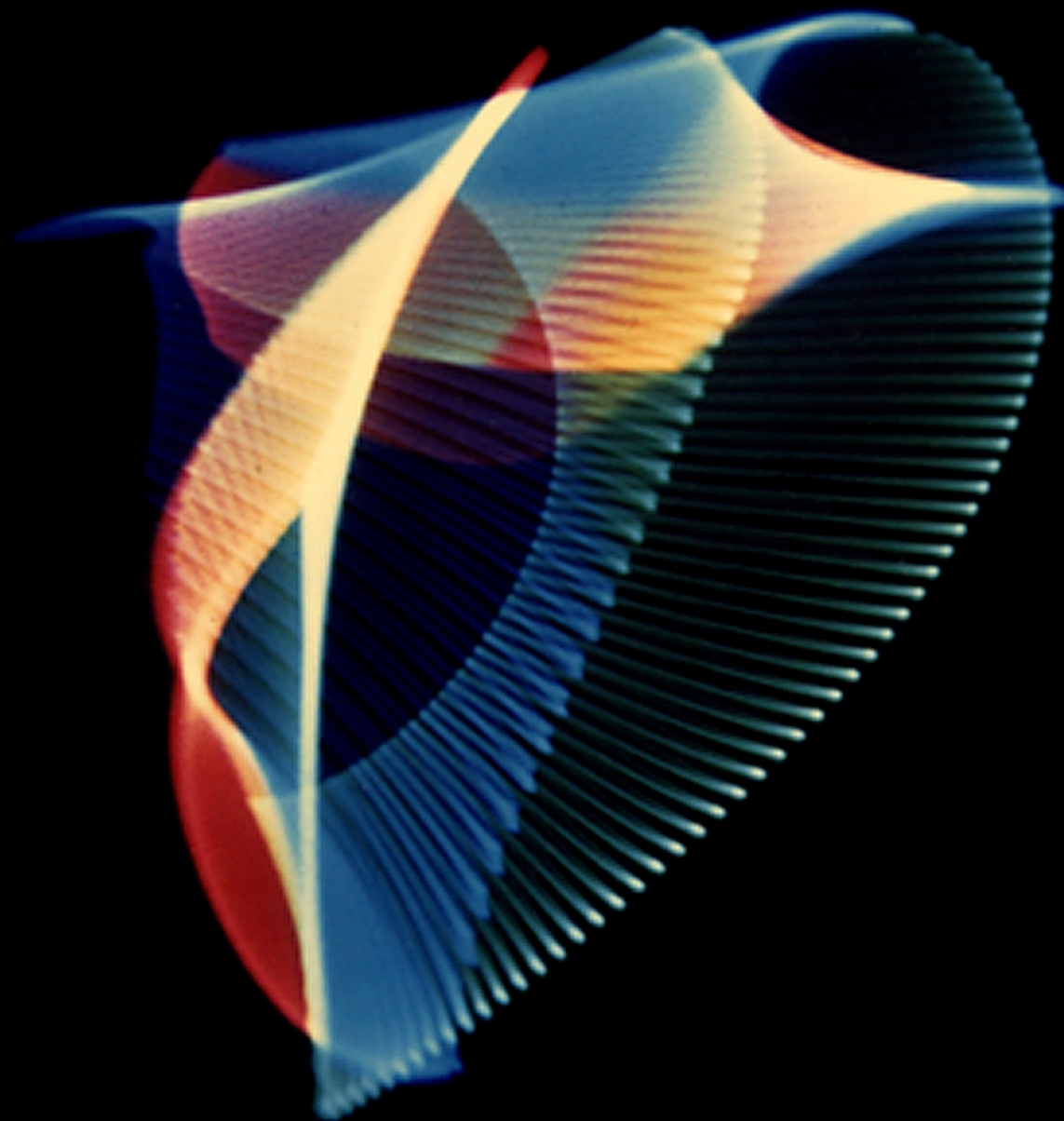
včera a dnes

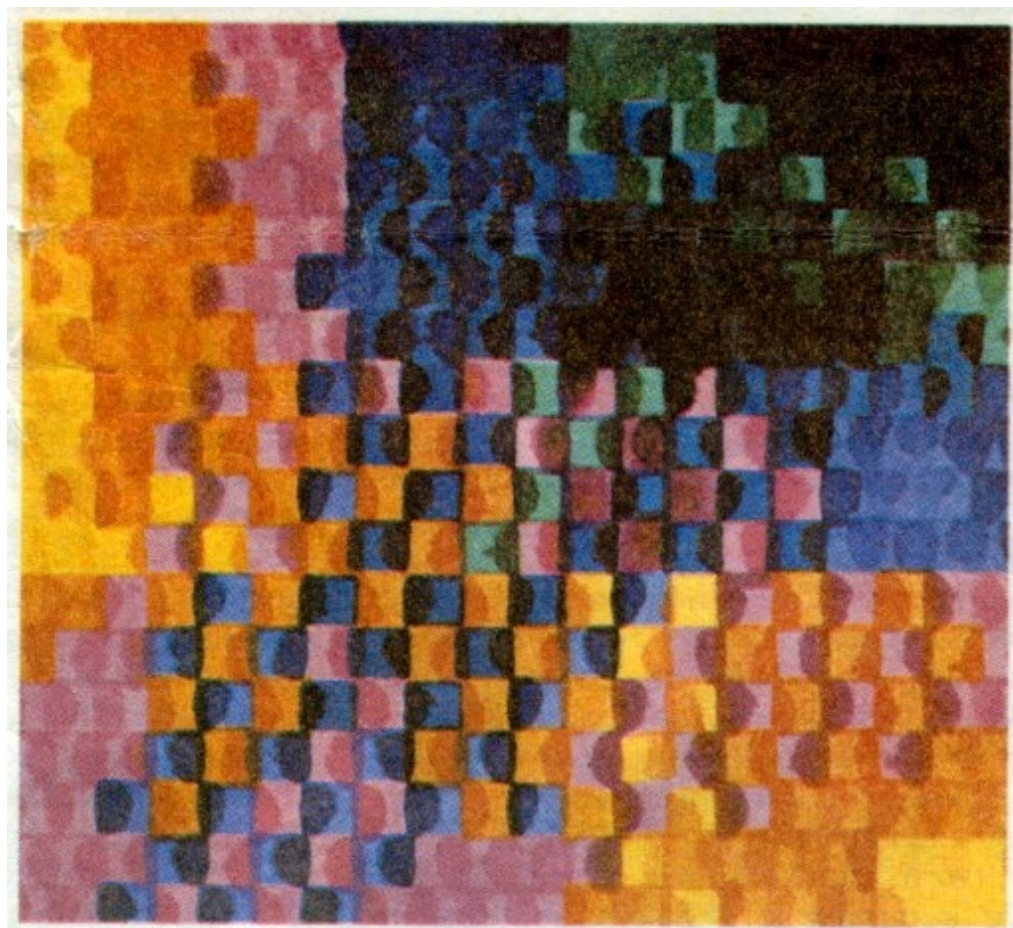
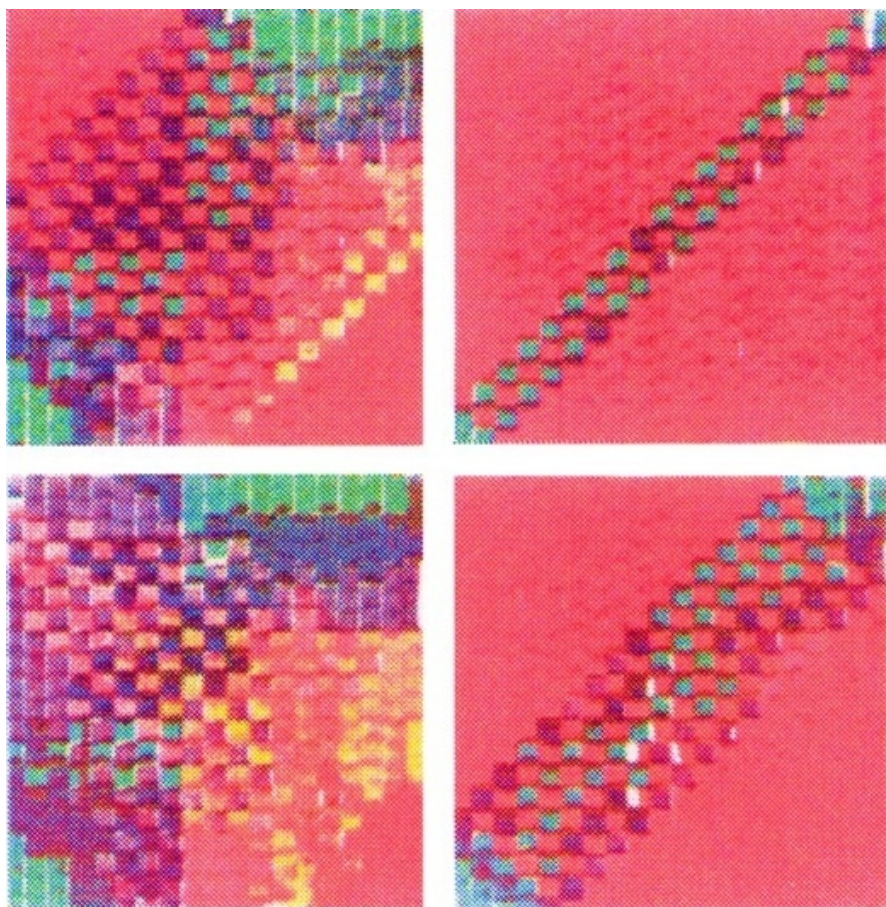
Tomáš Staudek

tomas.staudek@napric.cz

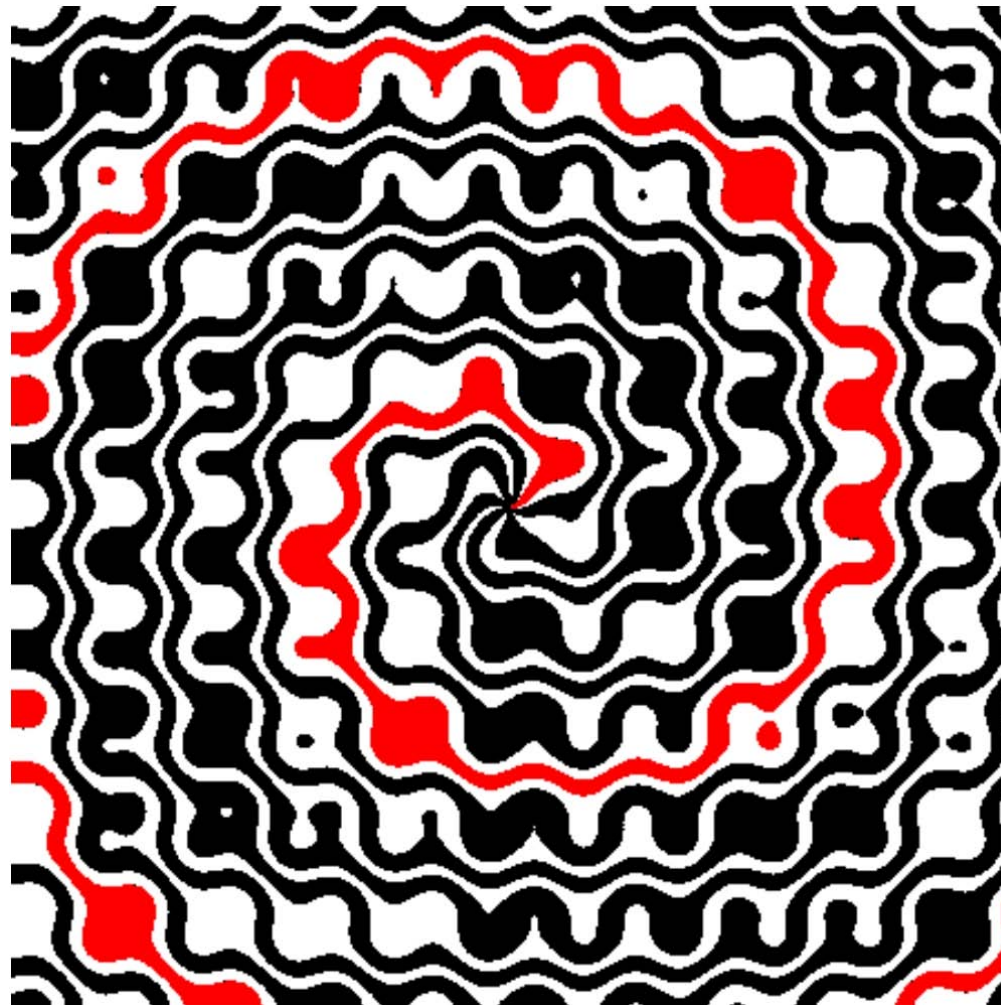


B. Laposky : Oscillons



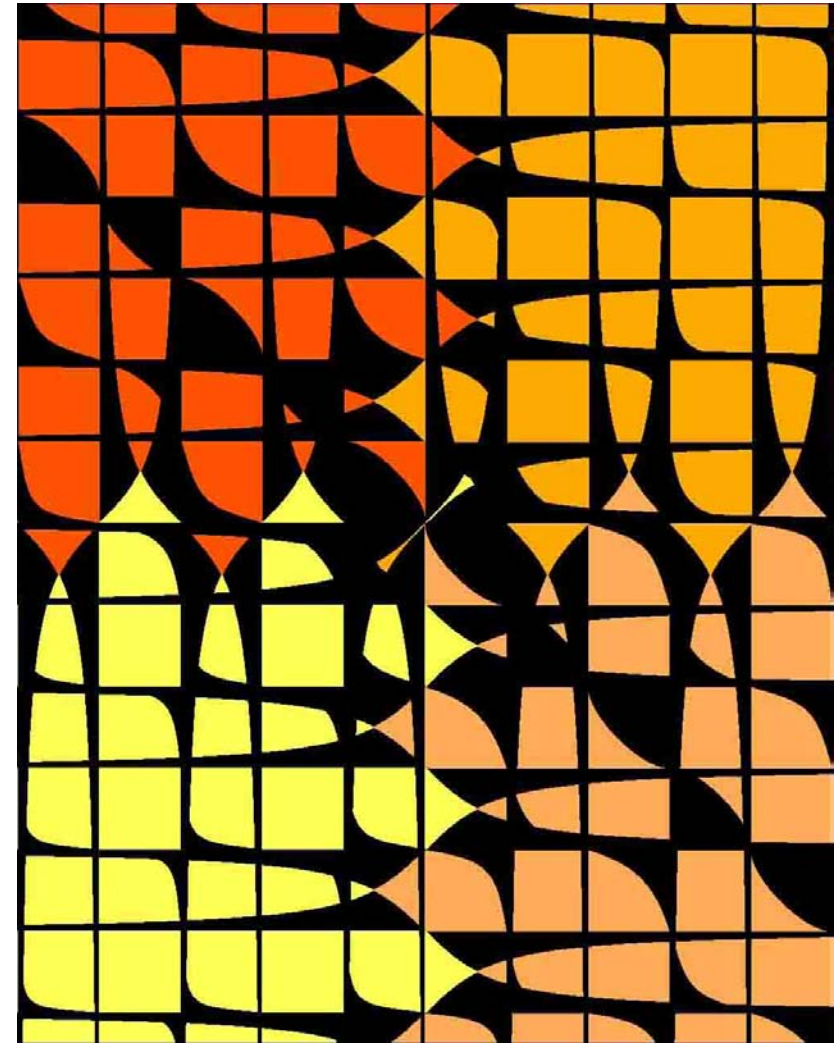
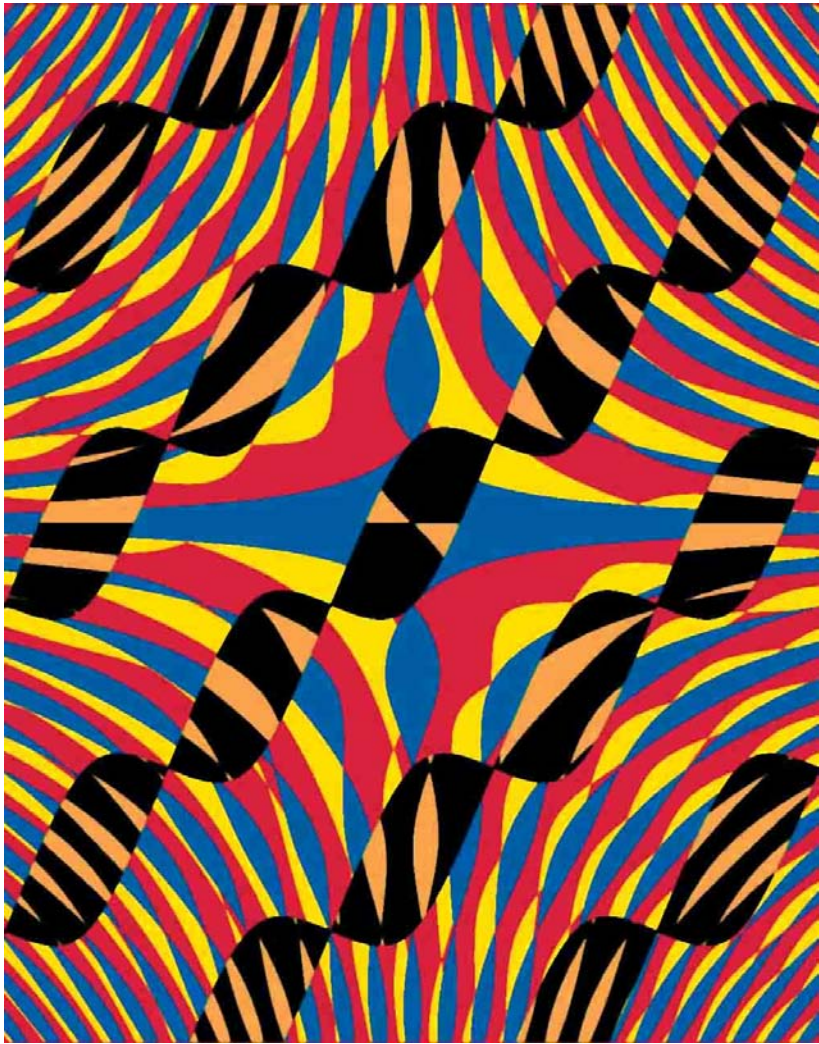


F. Nake: Násobení matic

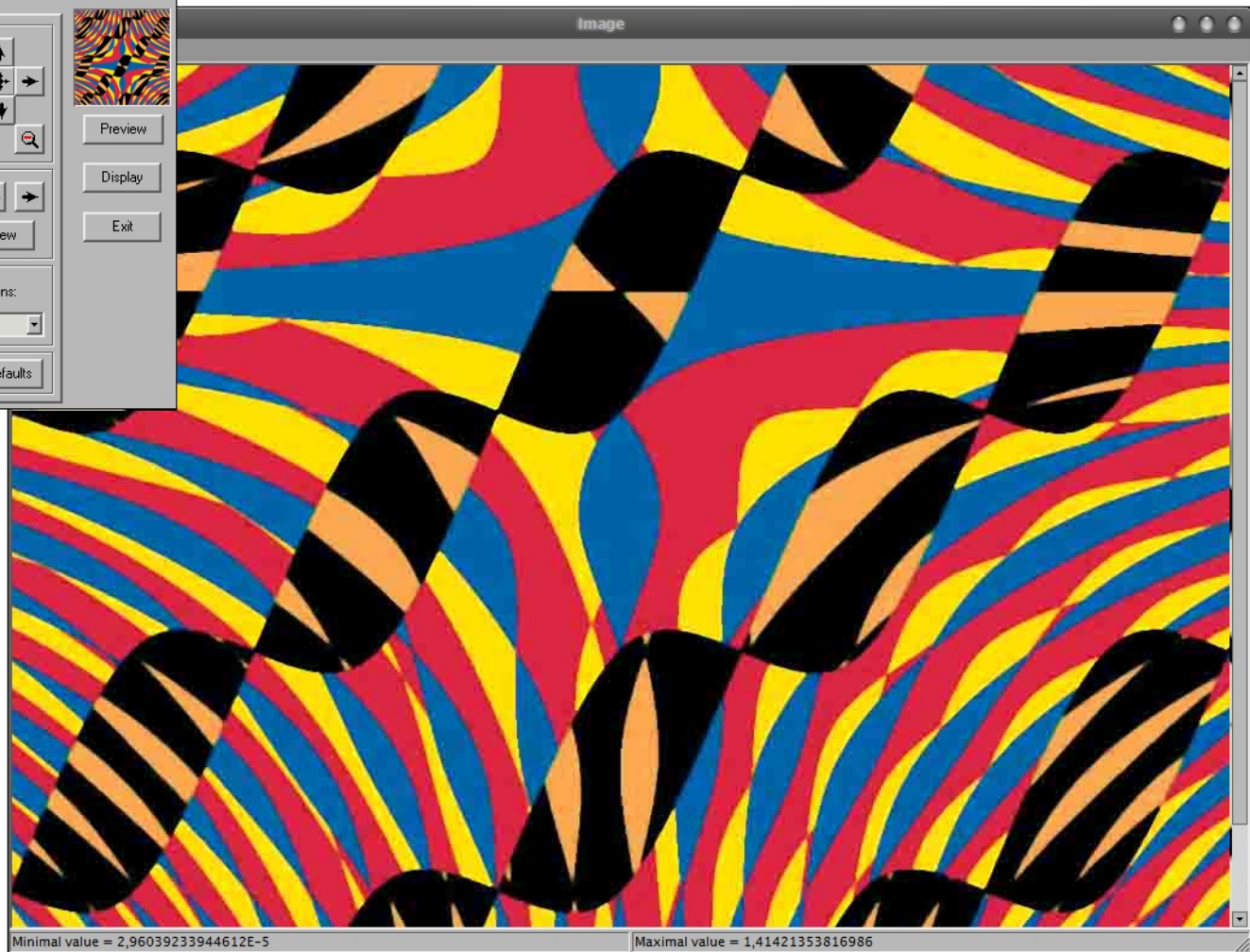
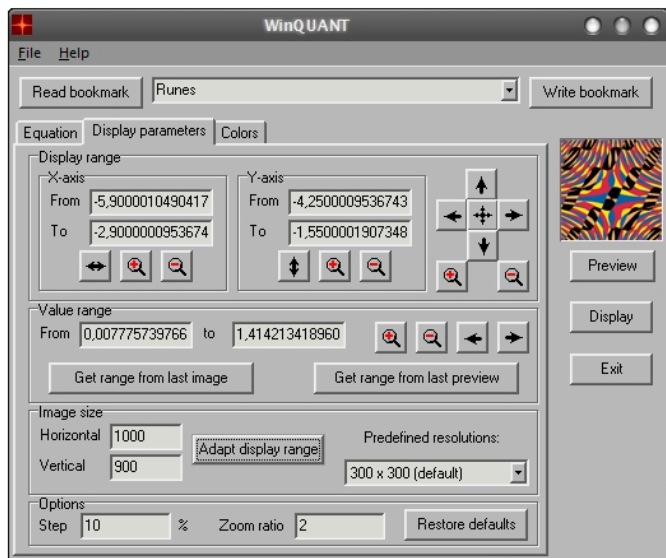


$$\text{mod}(\sqrt{x^2+y^2} - \frac{7}{2} \cdot \text{angle}(x,y) + \sin x + \cos y, 7 \cdot \pi) < \frac{\pi}{2}$$

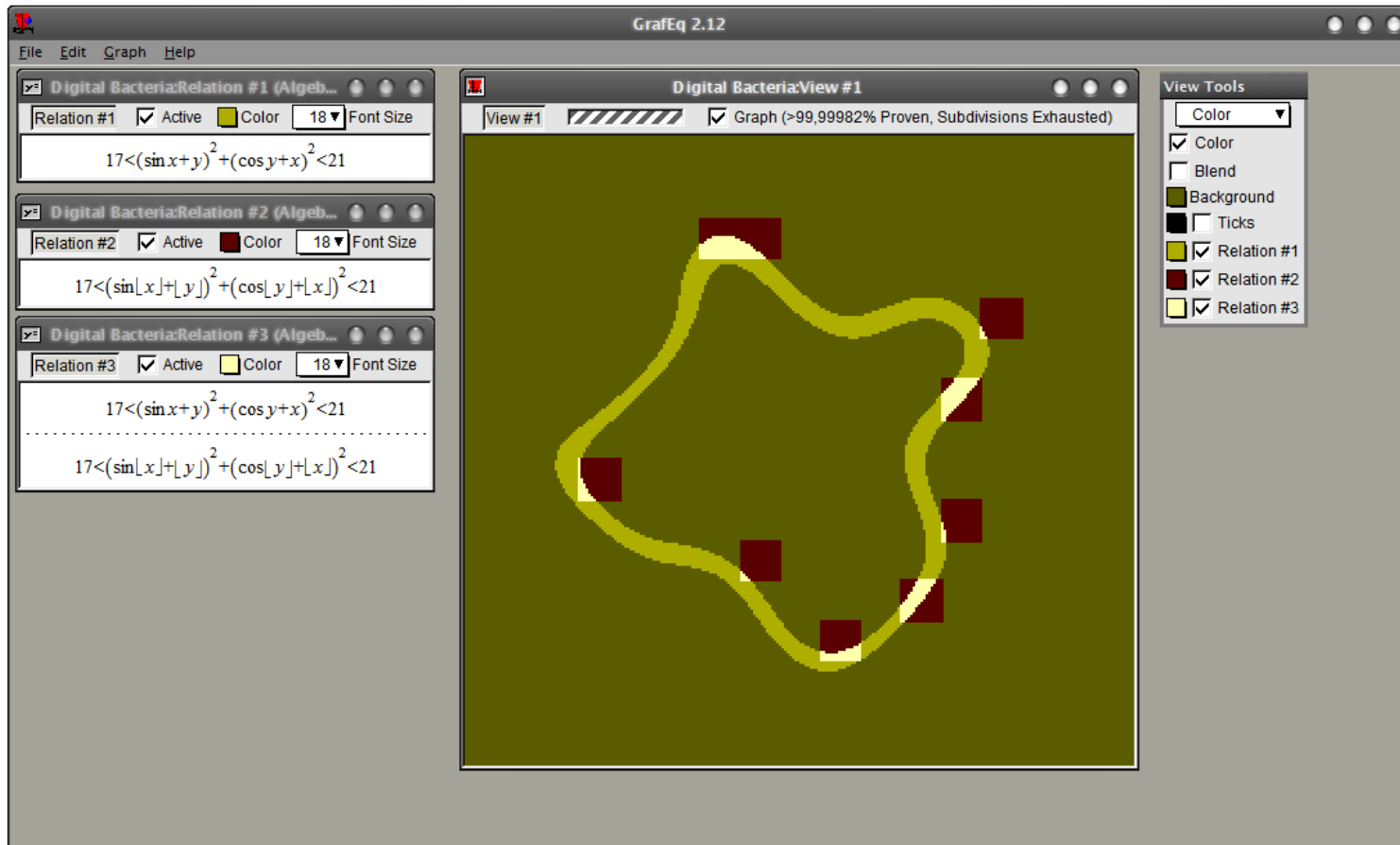
$$\text{mod}(\sqrt{x^2+y^2} - \frac{7}{2} \cdot \text{angle}(x,y) + \sin x + \cos y, \pi) < \frac{\pi}{2}$$



T. Mrkvička: Barevné kvantování

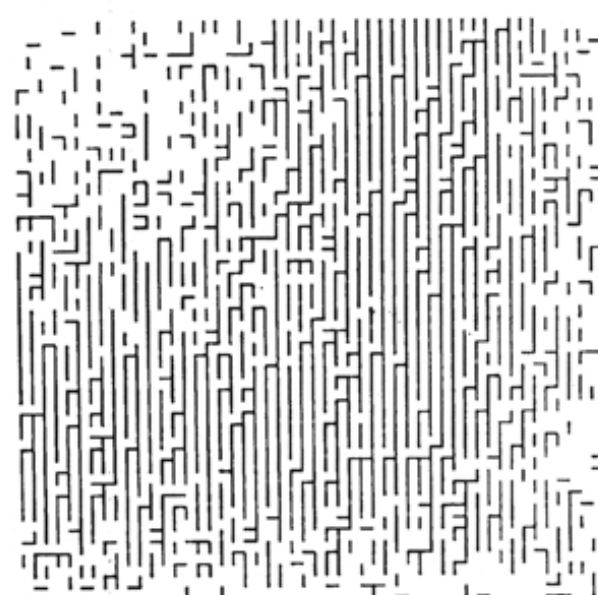
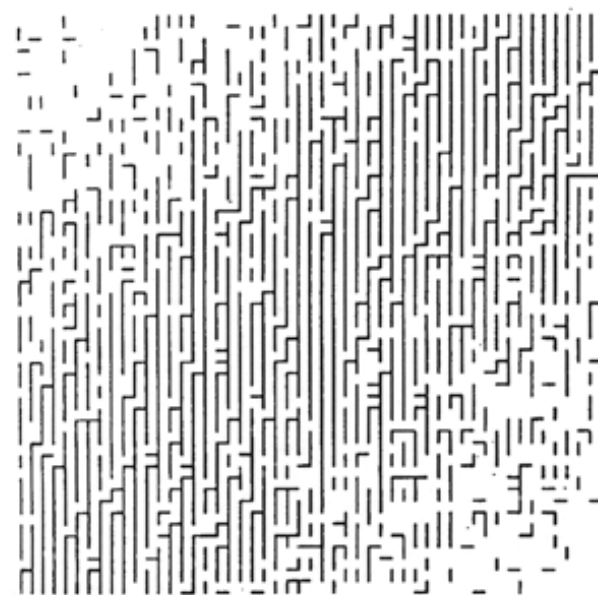
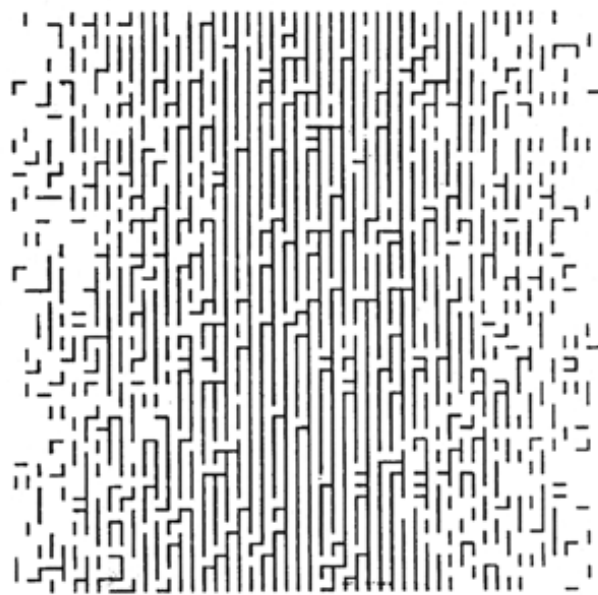
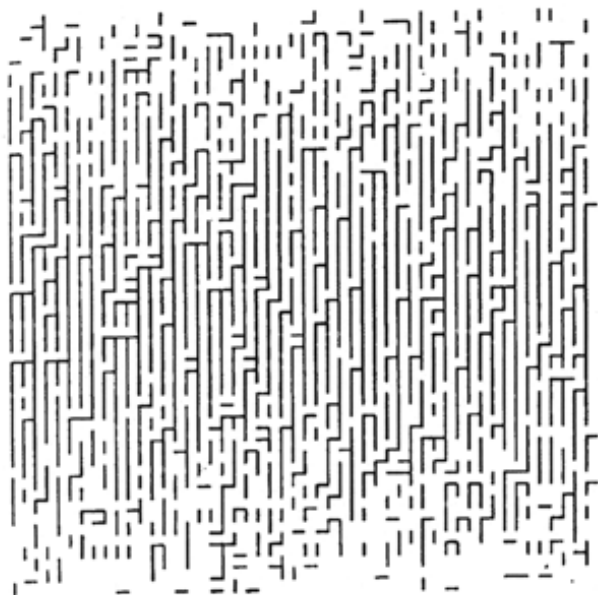


 winquant.zip



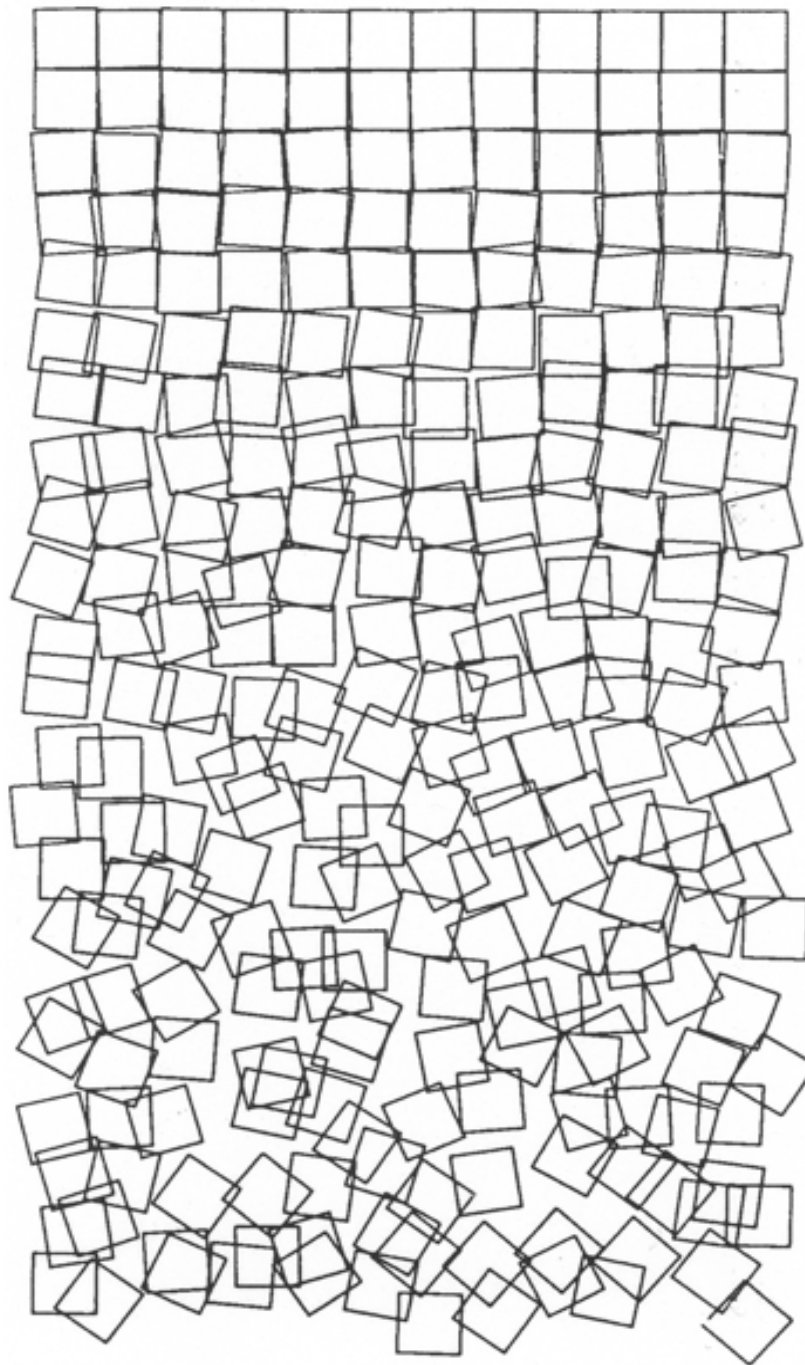
➔ [grafeq.zip](#)

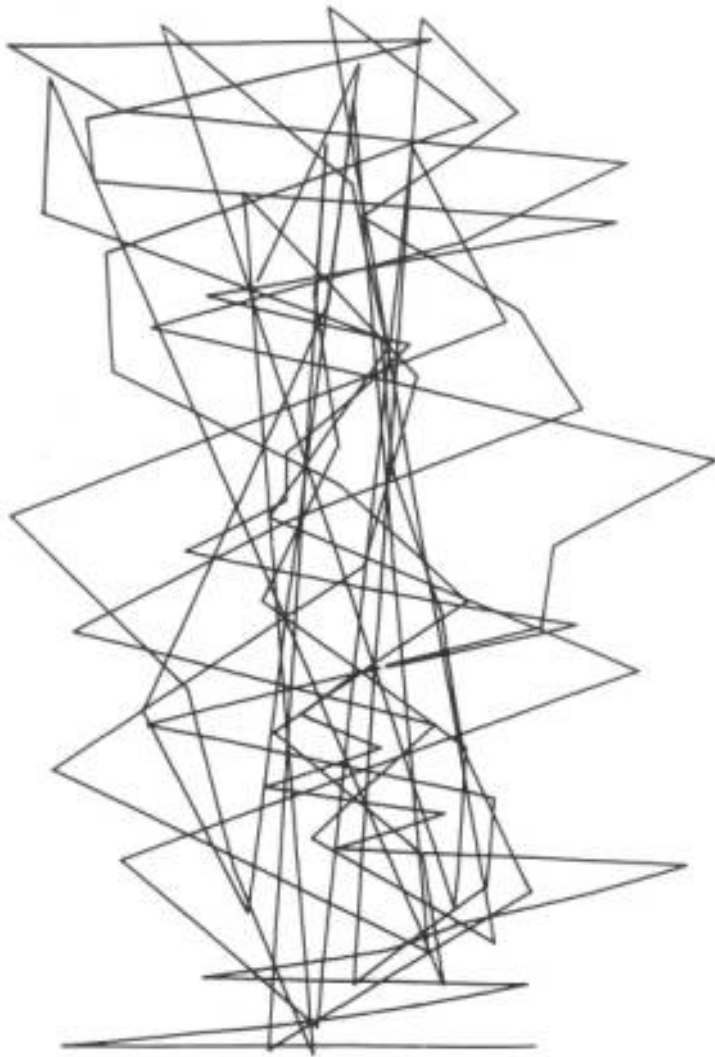
<http://www.peda.com/grafeq/>



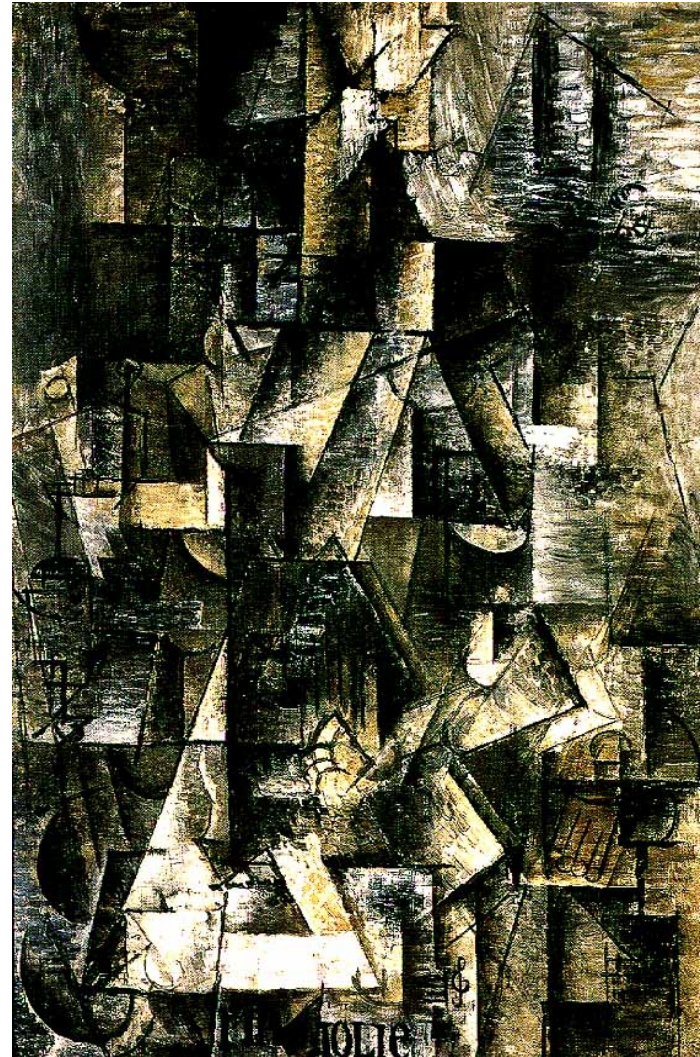
F. Nike: Random Structure

**F. Nake:
Gravel Stones**

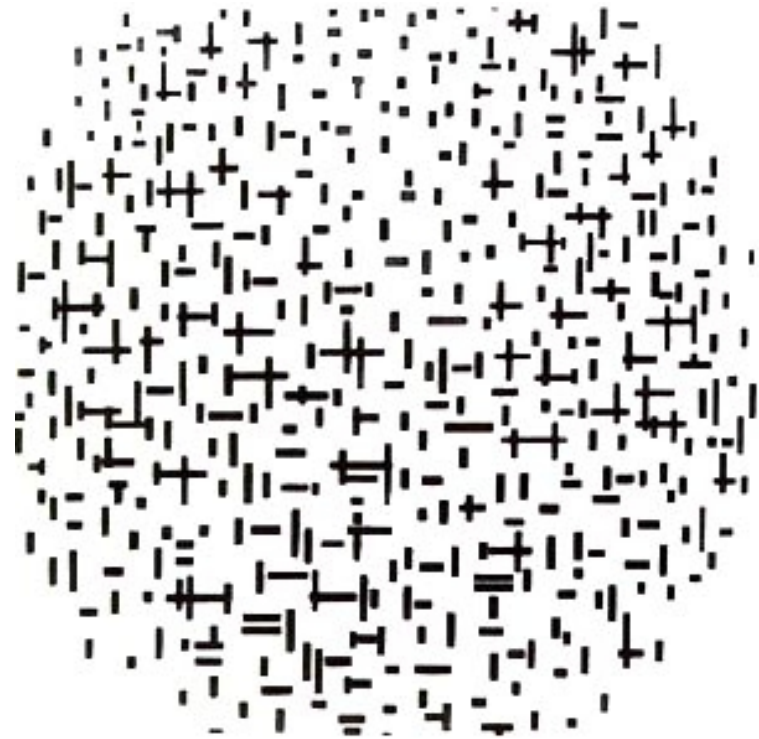




**A. M. Noll:
Gaussian-Quadratic**



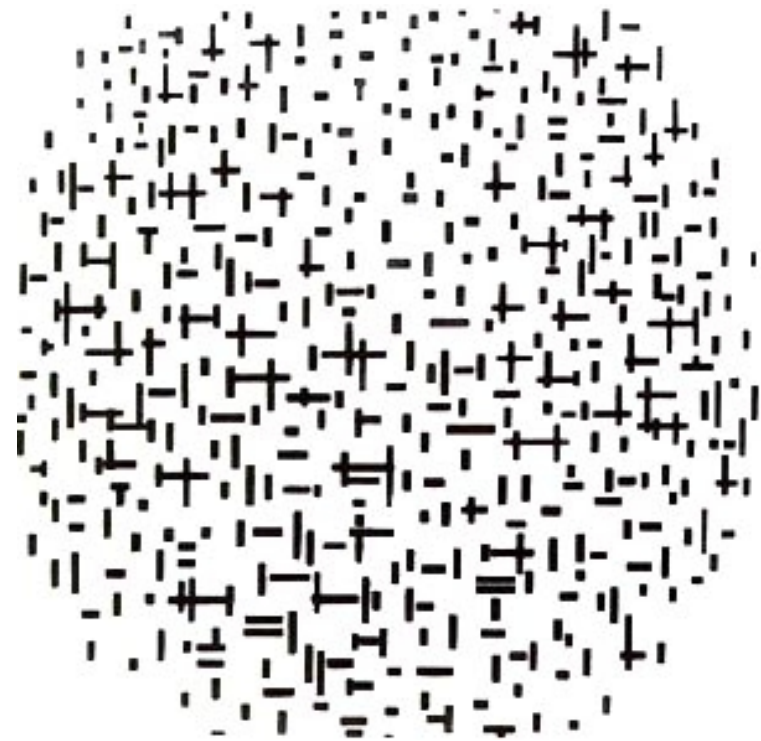
**P. Picasso:
Ma Jolie**



**Který obraz je od Mondriana – *Composition with Lines* (1917)
a který od Nolla – *Computer Composition with Lines* (1964) ?**



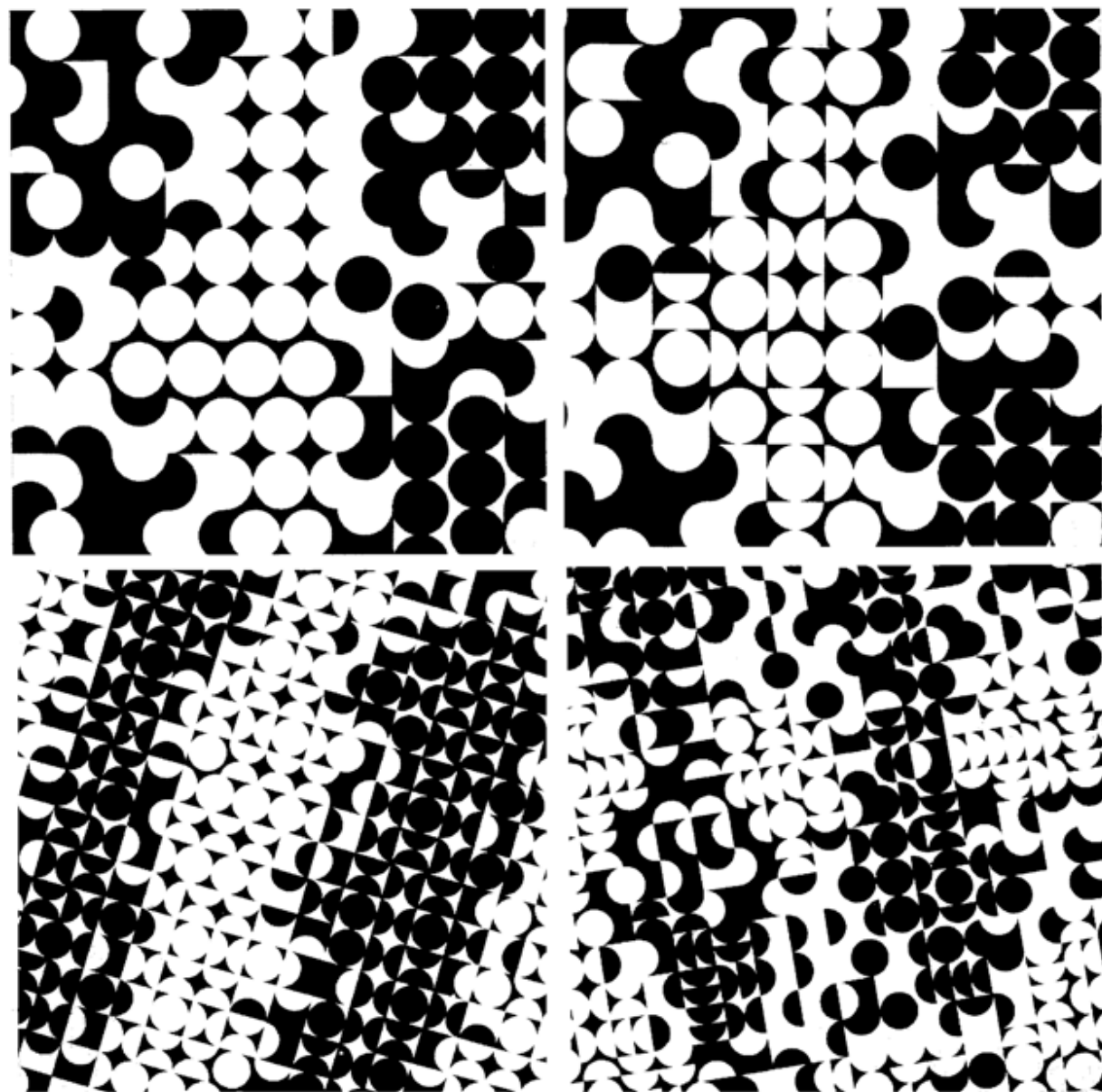
A. M. Noll

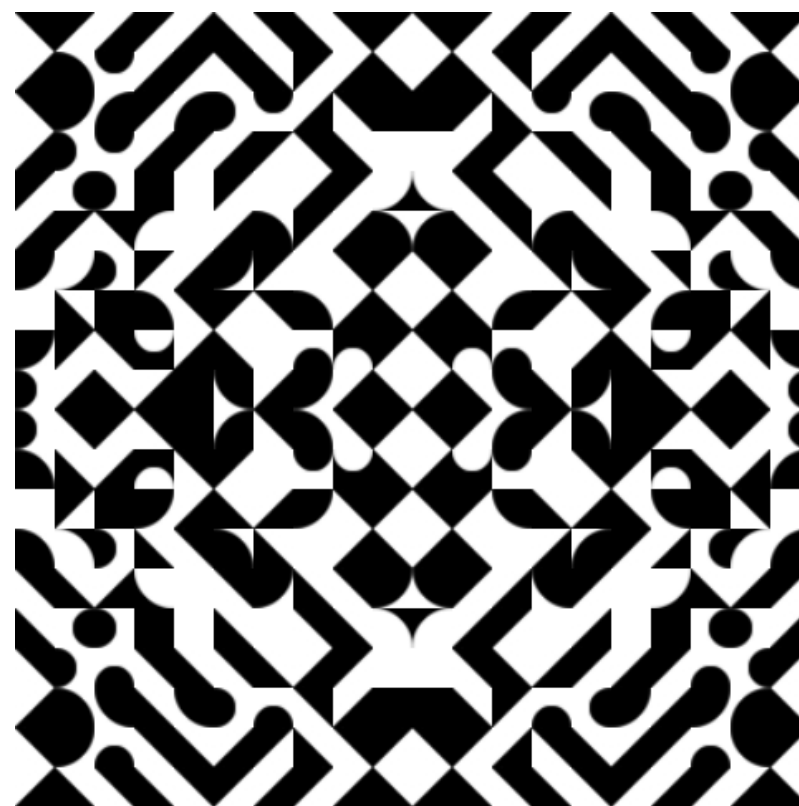
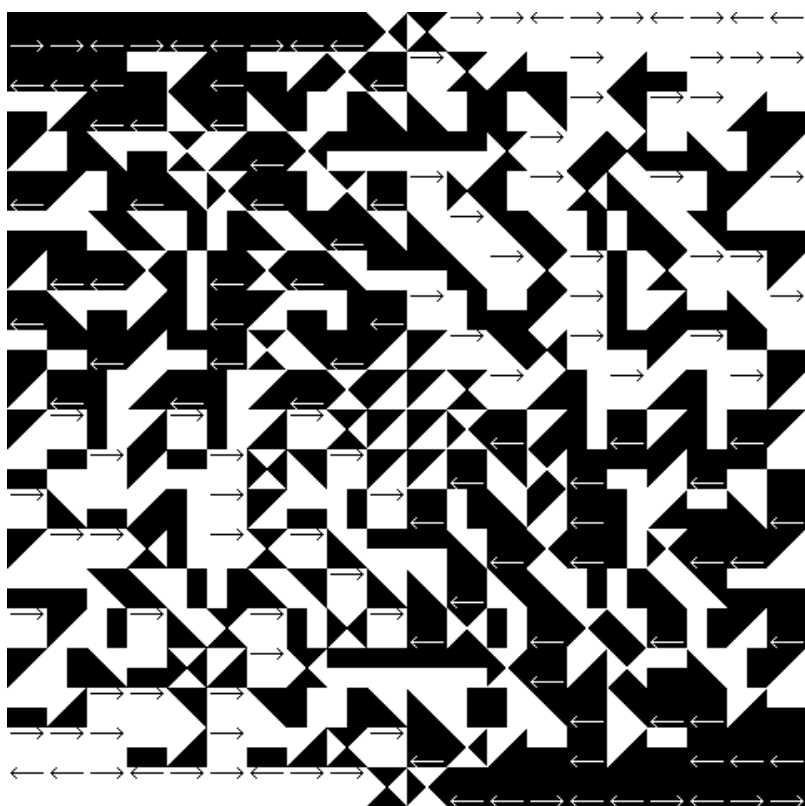


P. Mondrian

**28 % respondentů odpovídá správně,
56 % respondentů preferuje Nollův obraz**

**Z. Sýkora, *prog. J. Blažek* :
Struktury**





T. Staudek, prog. P. Machala :
Struktury + pravidla

Project Symbols Picture Construction Evocation Rendering Evaluation

Evaluation schema: (new)

Evaluation criteria: information measur

Color matching: hue +/- 0 %

Symbol matching: index & orientation

Search the maximum for:

Depth of search (steps): 100

Picture:

Available symbols: [in total 4]

1. b&w_arrow, B=100%, P=50% 2. b&w_cross, B=43%, P=50%
 3. b&w_diagonal, B=43%, P=50% 4. b&w_vertical, B=24%, P=50%

Arthur - Evaluation results

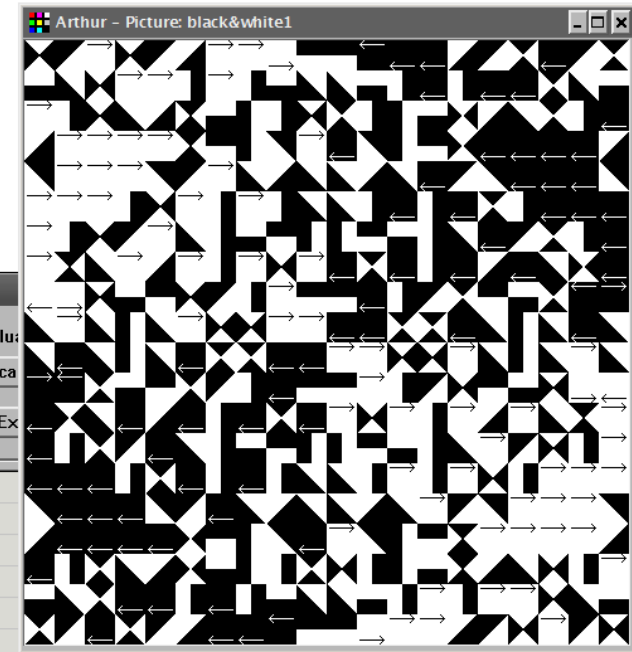
Information metrics: Pattern metrics: Evaluation

c_M = 16 b/s

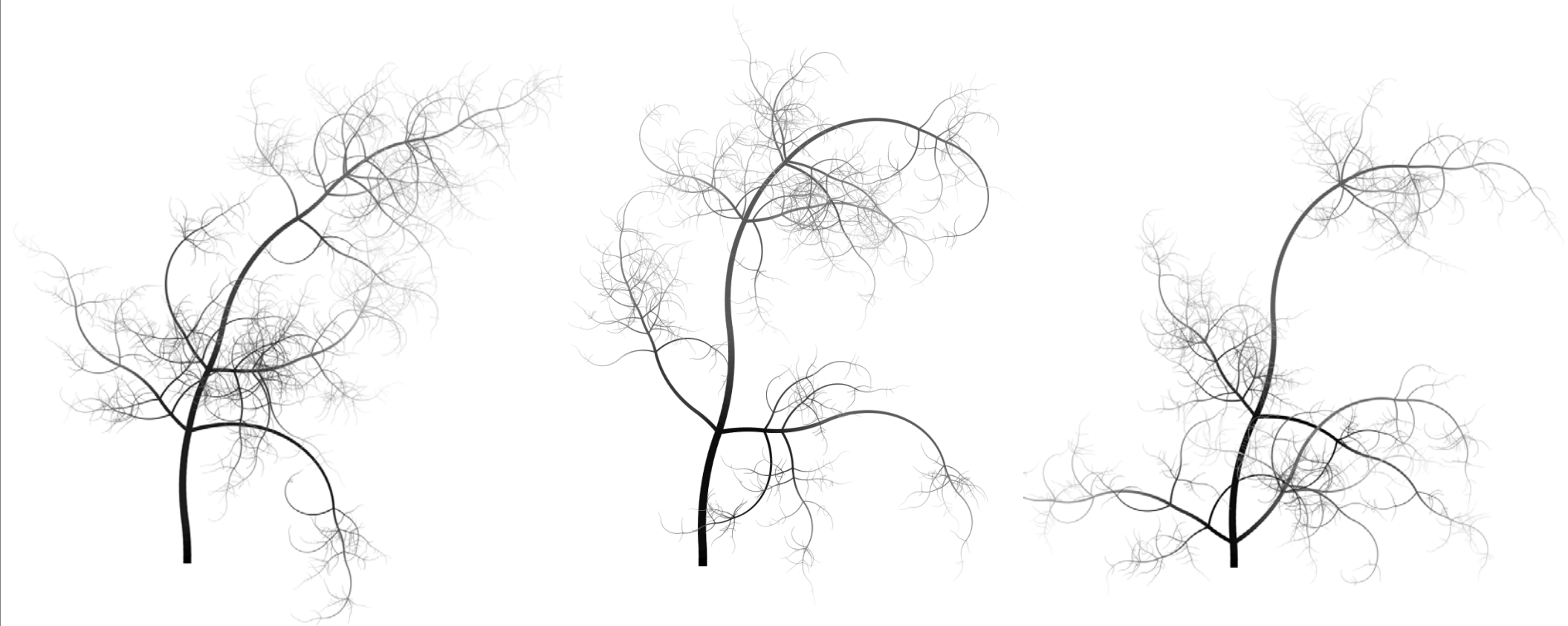
t_ref = 8 s

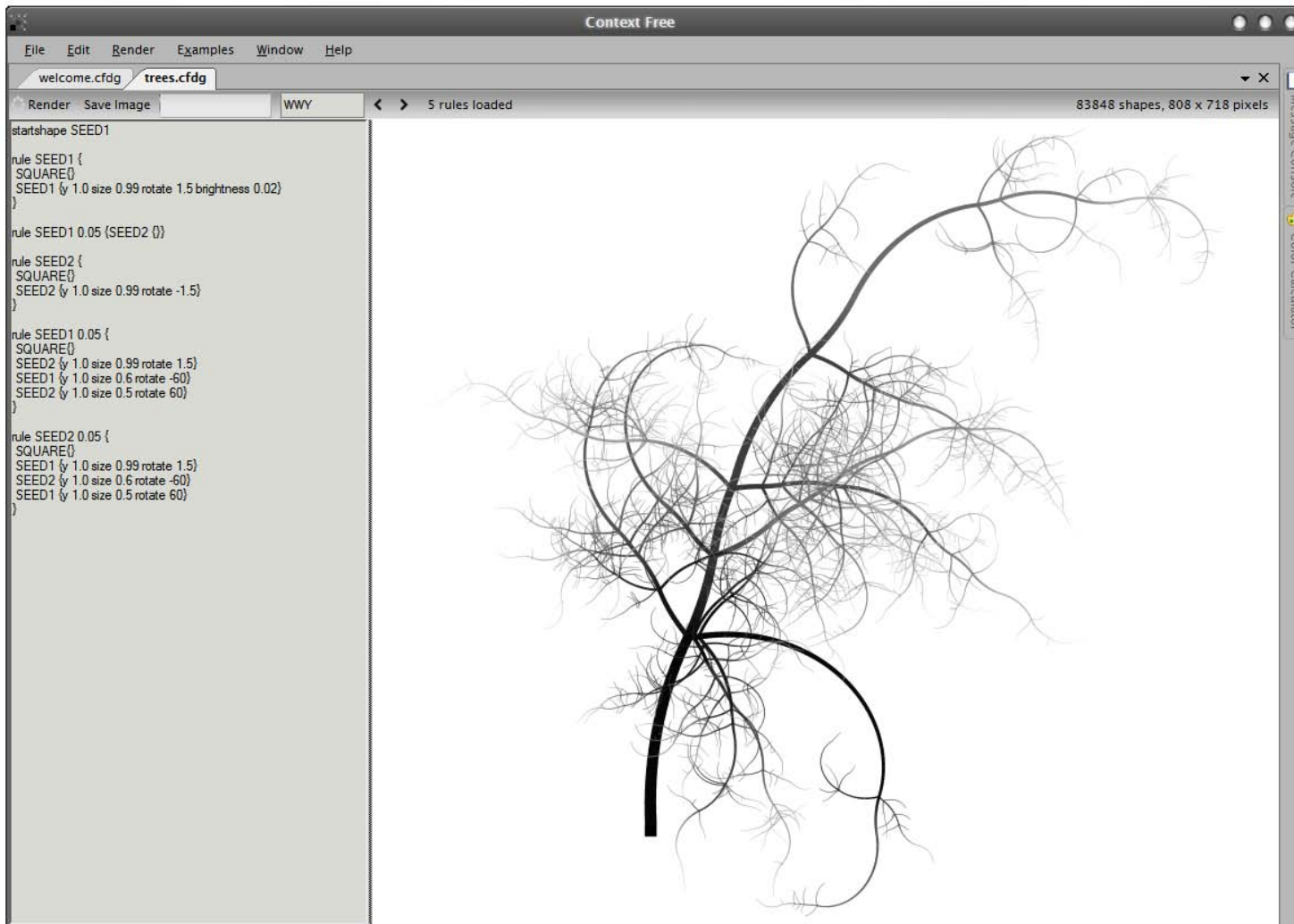
N =	400	(elements)
m =	24	(diff. elems.)
R =	12,7461 %	(redundancy)
I =	1600,0205 b	(inform. cont.)
I_max =	1833,7526 b	(max of I)
I_sup =	3457,5425 b	(hypot. max of I)
I' =	200,0026 b/s	(inform. flow)
H =	4,0001 b	(entropy)
H_max =	4,5844 b	(max of H)
H_sup =	8,6439 b	(hypot. max of H)
c_M =	16 b/s	(refer. capacity)
t_ref =	8 s	(refer. time)
t_min =	100,0013 s	(min of perc. time)
c_ref =	0,08	(perc. quotient)

(index)	(cardinality)	(probability)	(entropy)
i	n_i	P_i	H_i
1 b&w_arrow (1.)	[2]	0,005	7,6439
2 b&w_arrow (1.)	[2]	0,005	7,6439
3 b&w_arrow (1.)	[4]	0,01	6,6439
4 b&w_arrow (1.)	[4]	0,01	6,6439
5 b&w_diagonal (3.6)		0,015	6,0589
6 b&w_diagonal (3.6)		0,015	6,0589



➔ [arthur.zip](#)





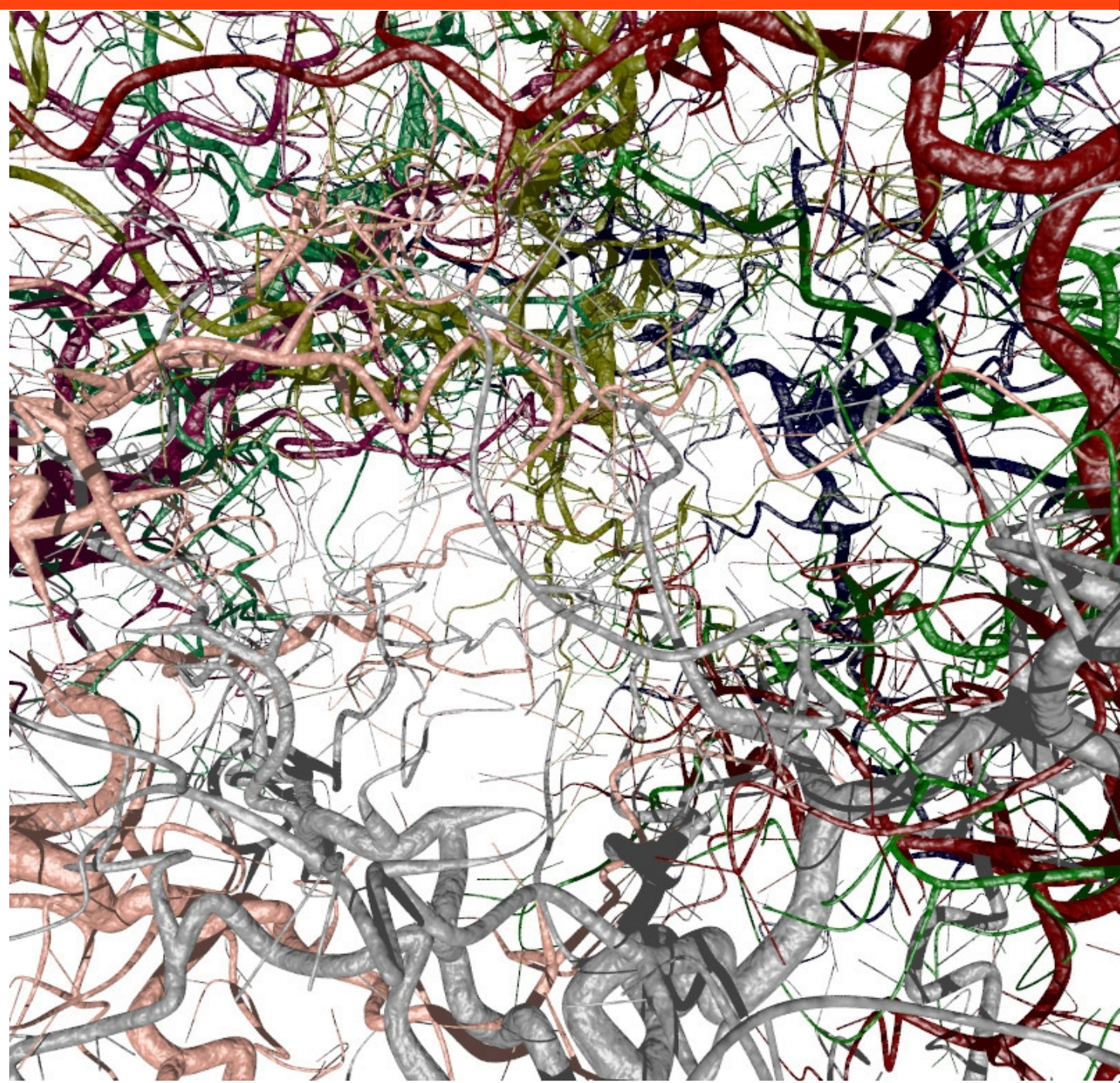
➔ [contextfree.zip](#)

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



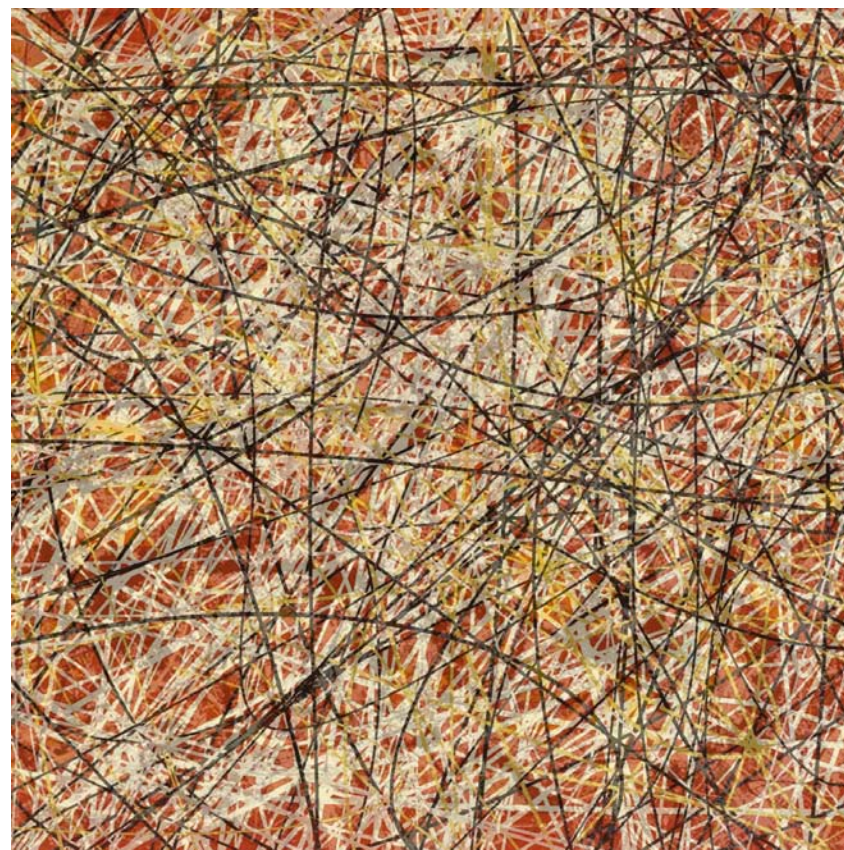
Z. Sýkora, *prog. J. Blažek* :
Linie

P. Bourke

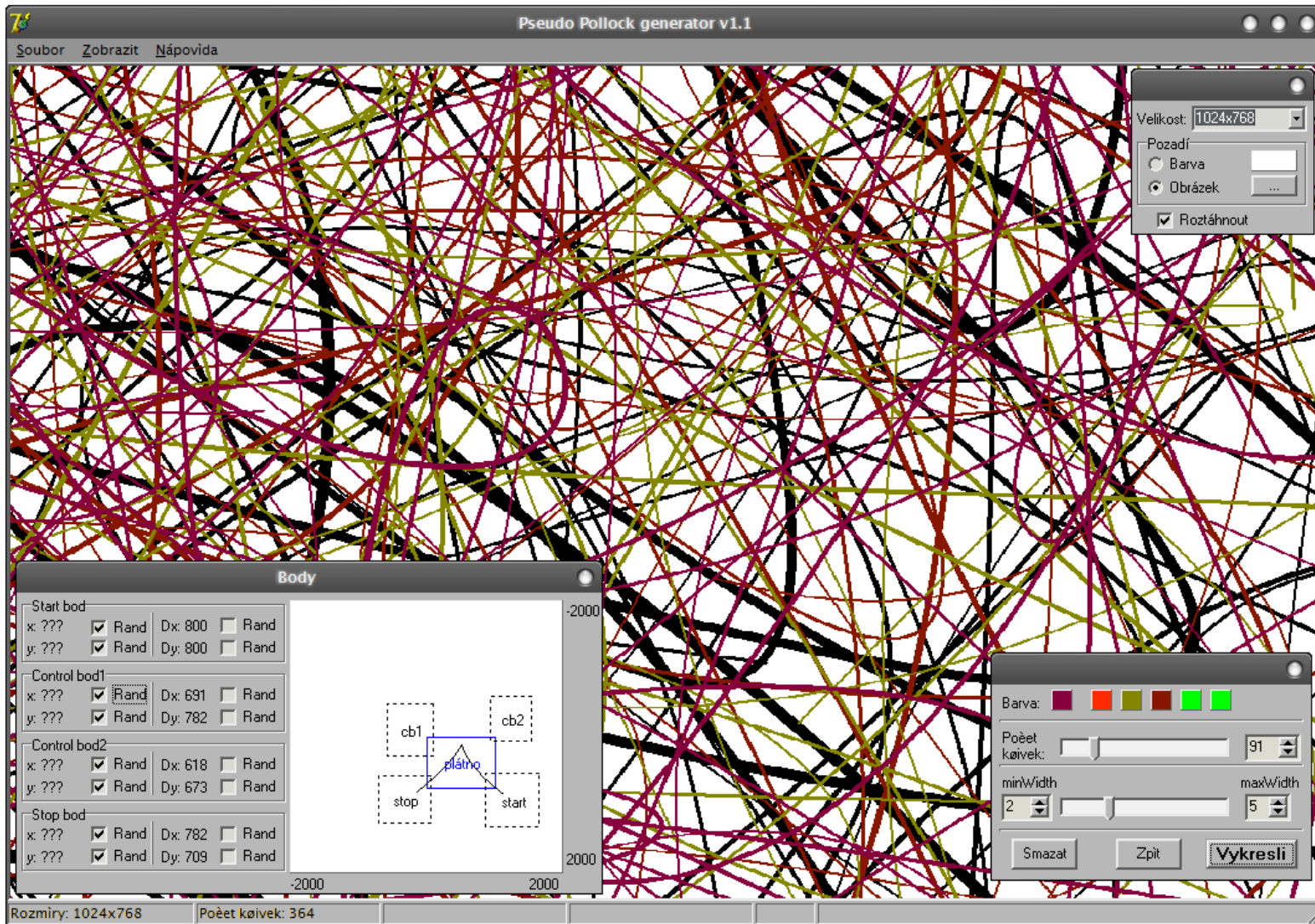




J. Kůr: Digitální Pollock



Rekonstrukce Pollocka dle J. Vilímka



➔ [pollock.zip](#)

Z. Čechová :
Sen

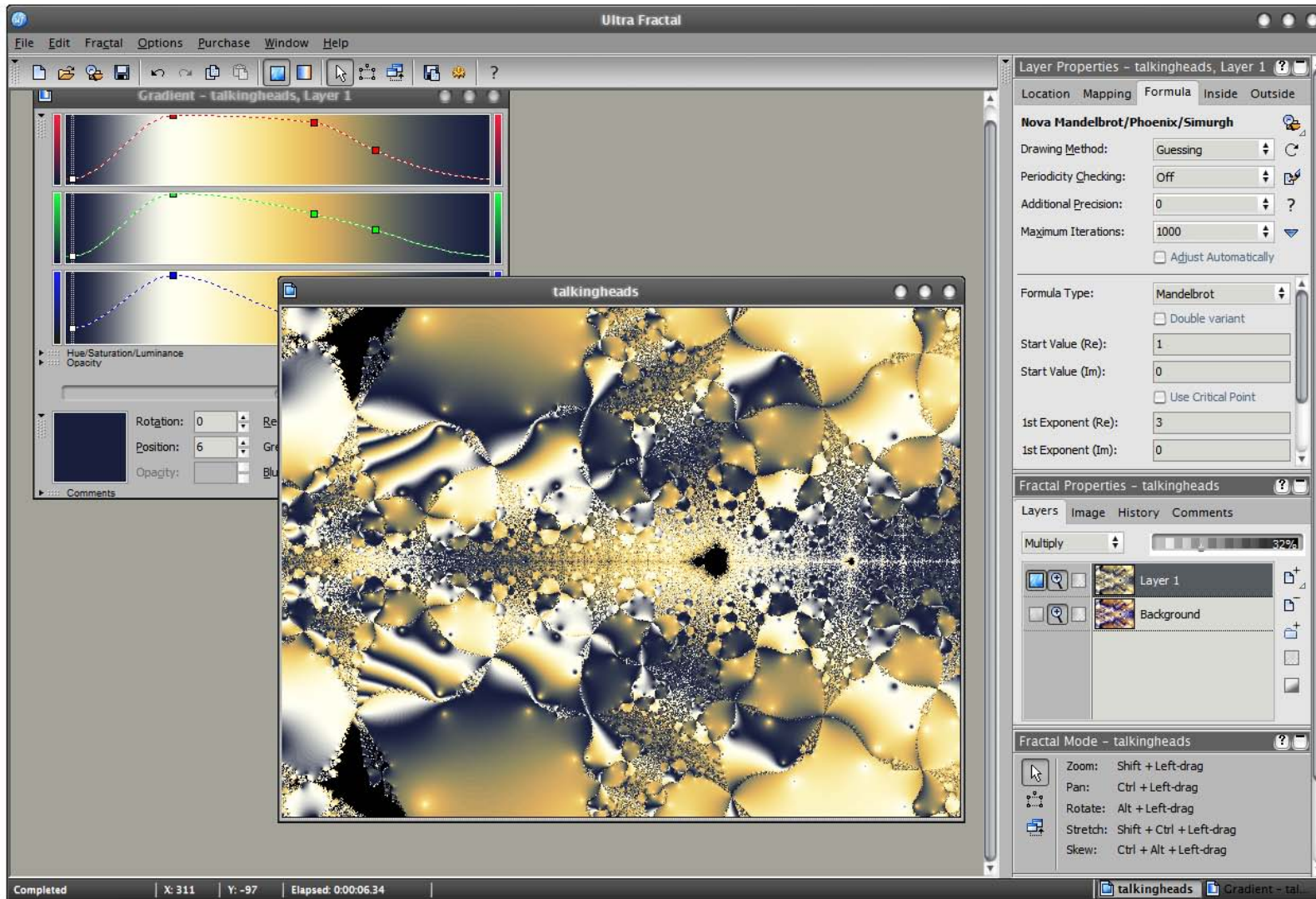




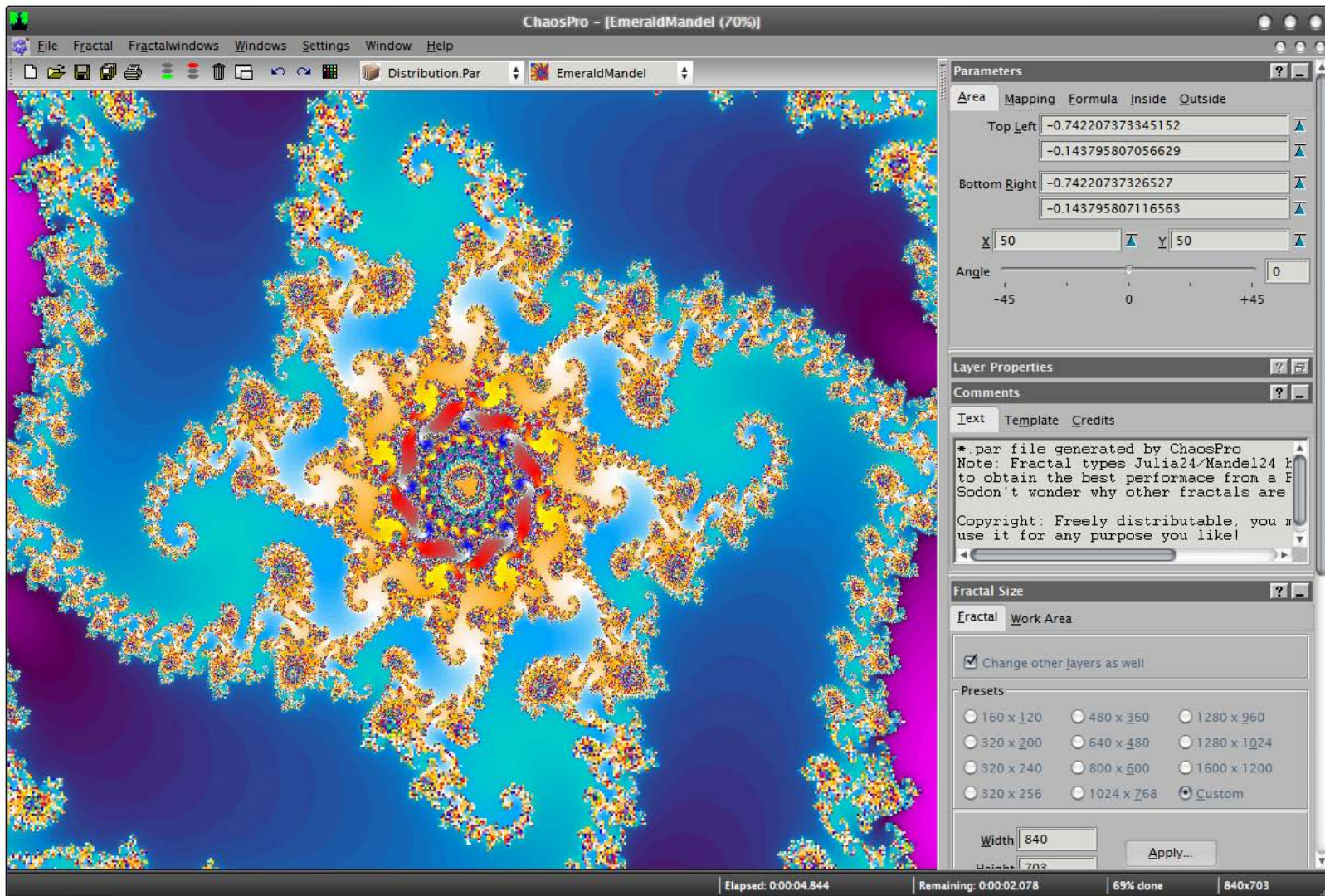
I. Serba: Rytmus



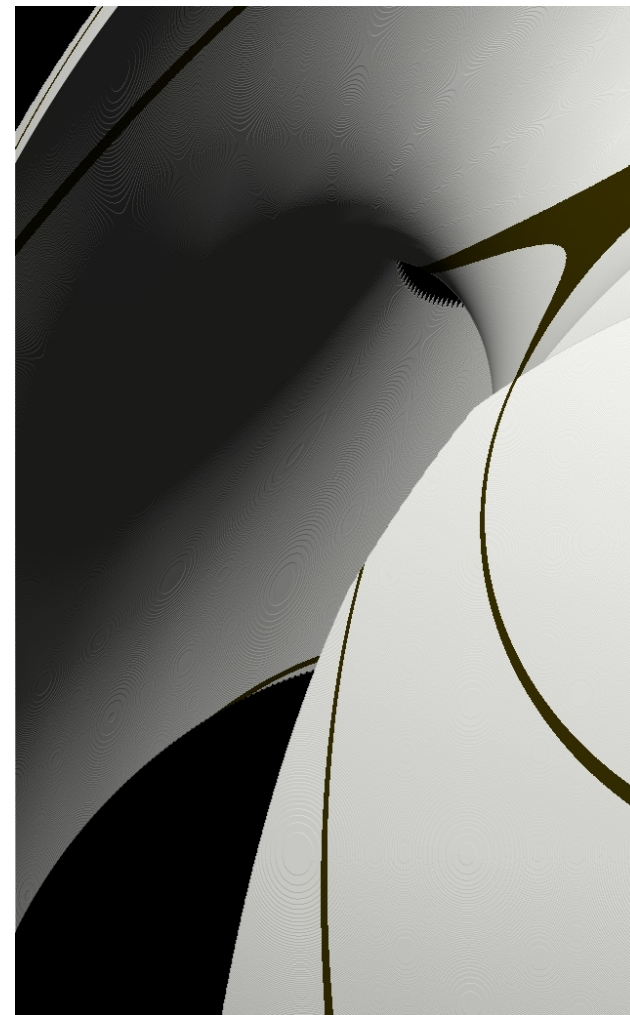
I. Serba :
Pocta Kandinskému



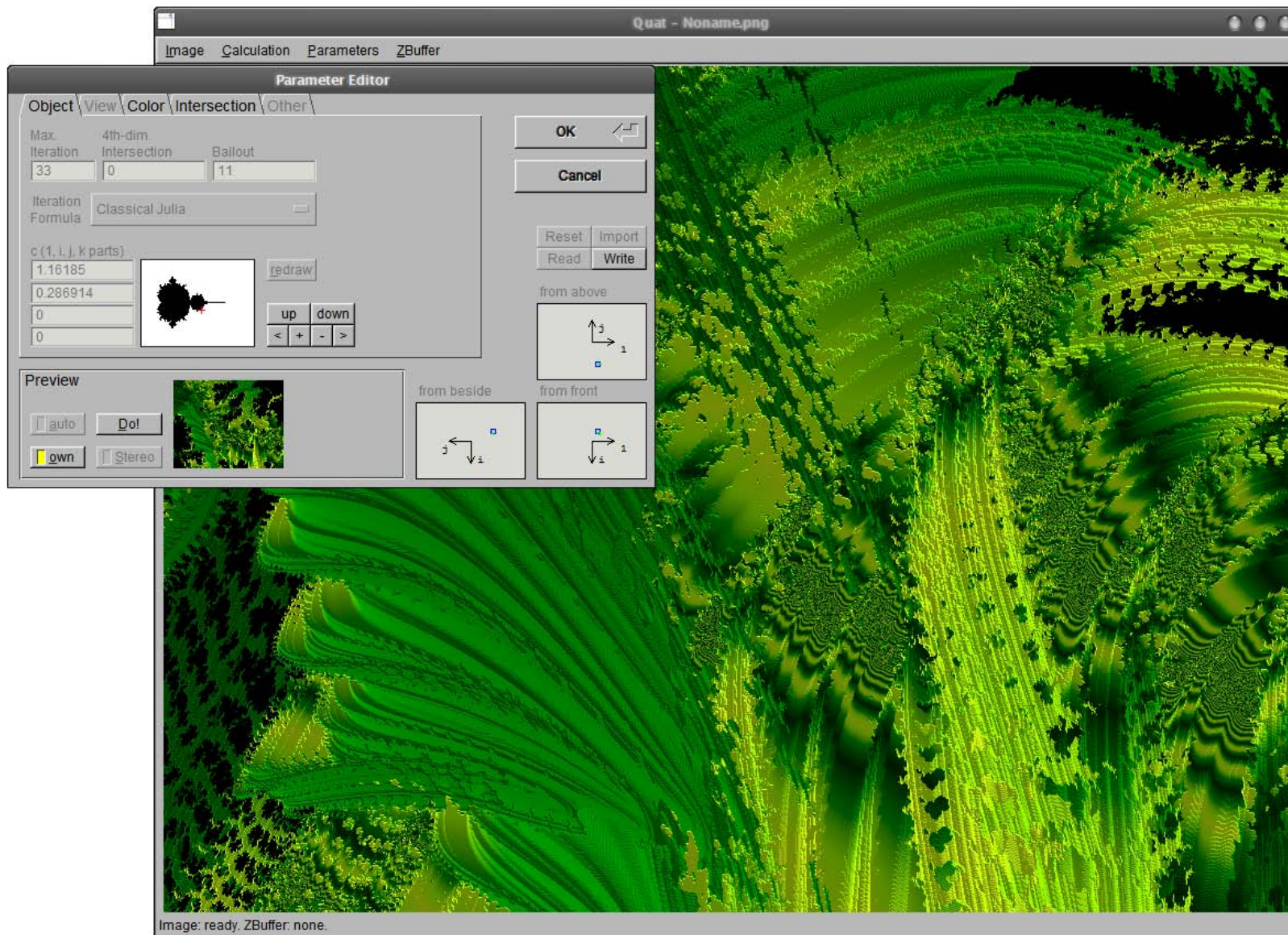
➔ [ultrafractal.zip](http://www.ultrafractal.org/)
<http://www.ultrafractal.org/>



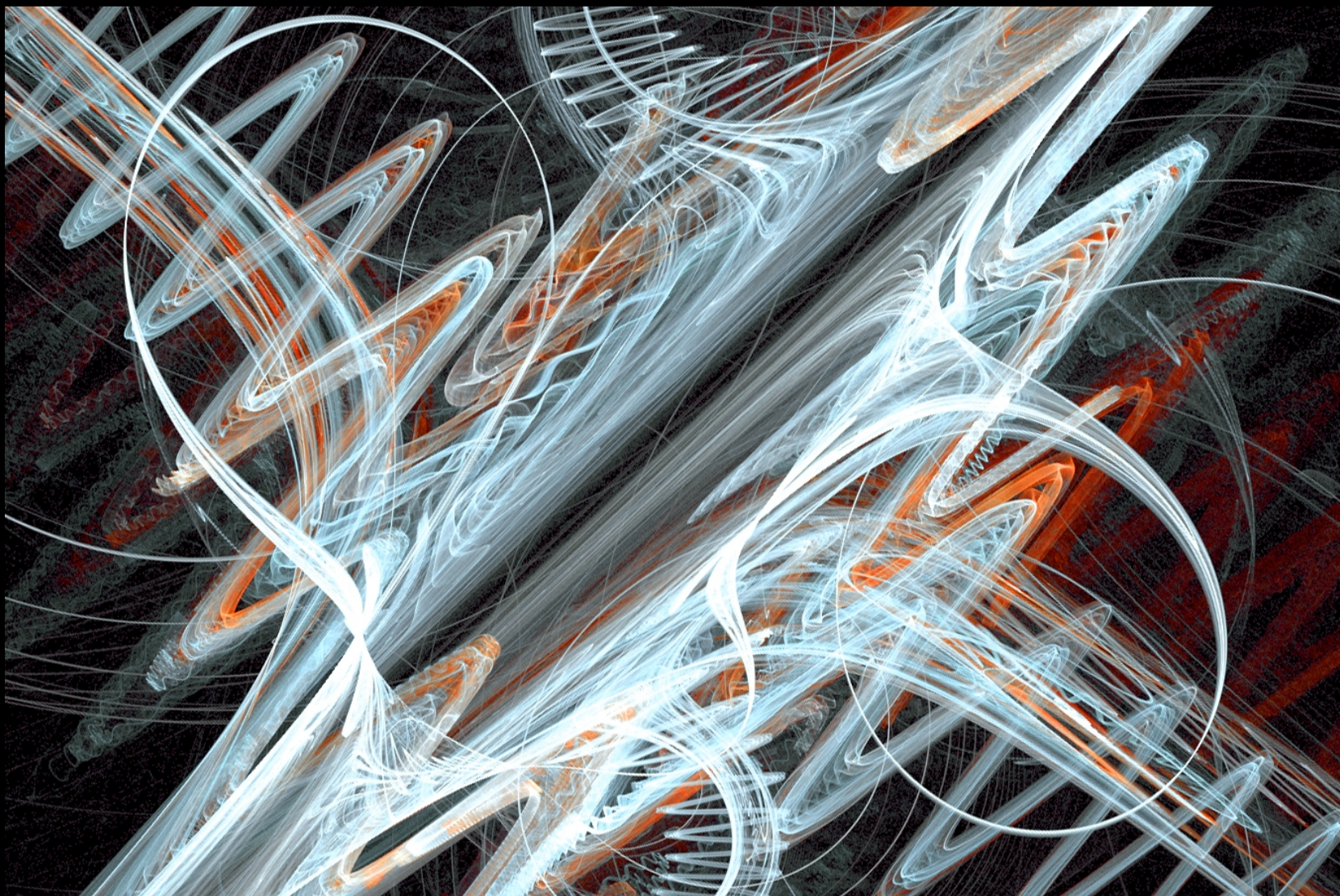
➔ [chaospro.zip](http://www.chaospro.de/)
<http://www.chaospro.de/>



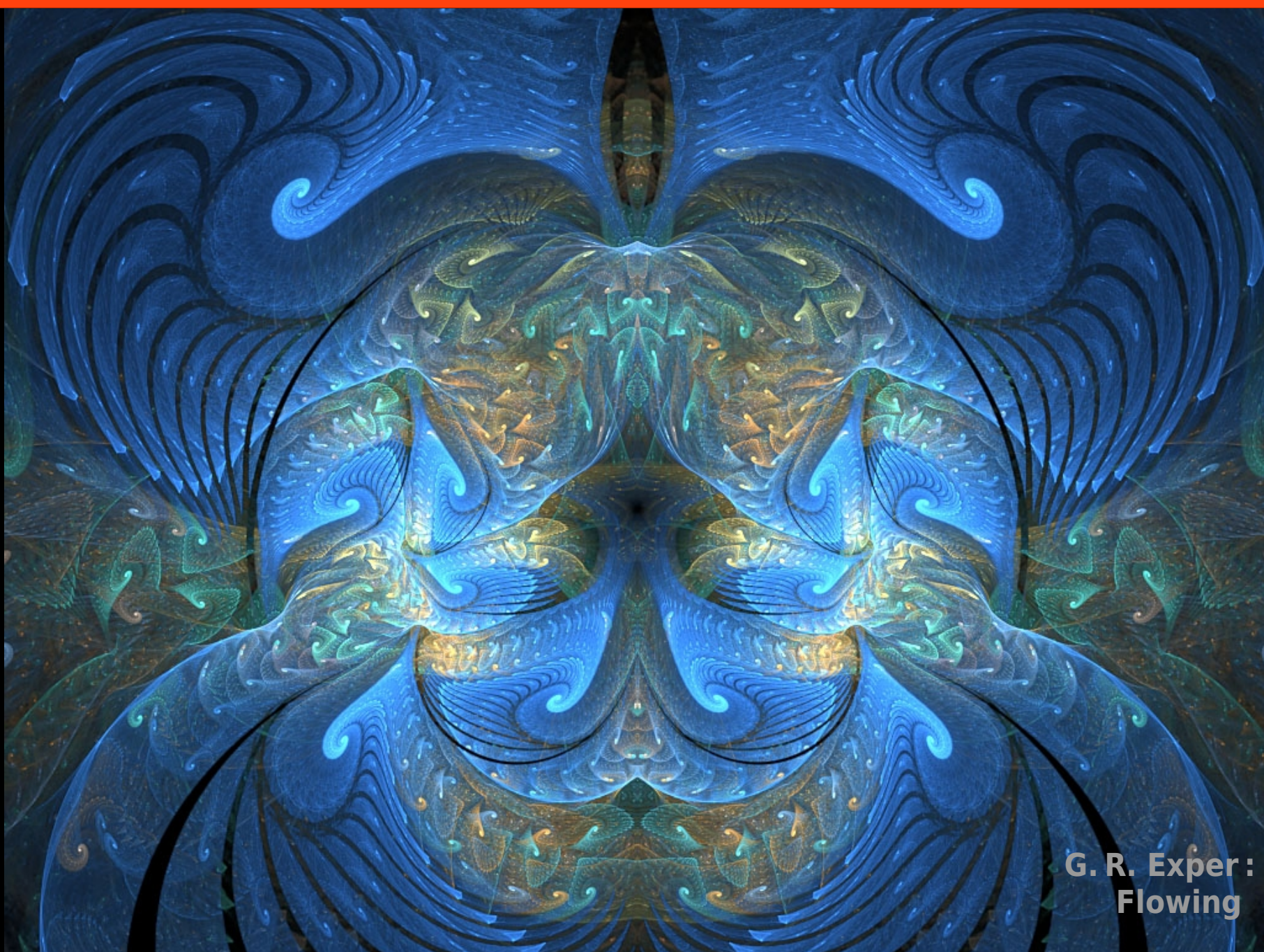
T. Staudek :
Quatermorphosis



➔ quat.zip



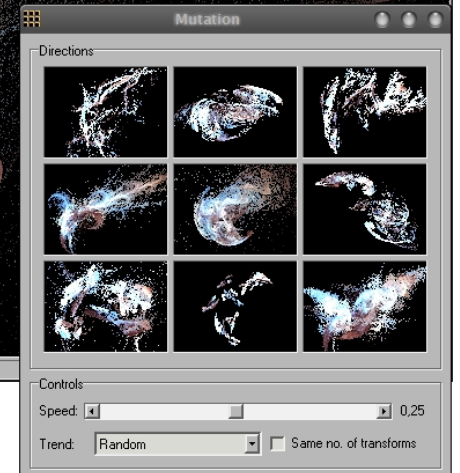
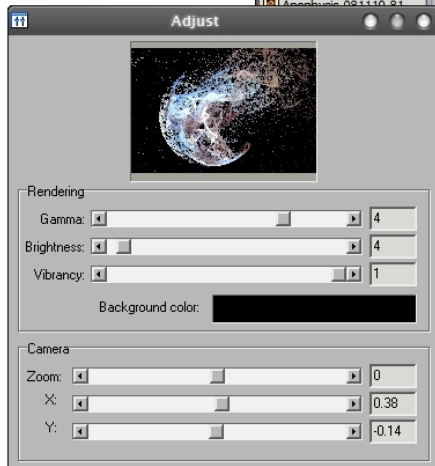
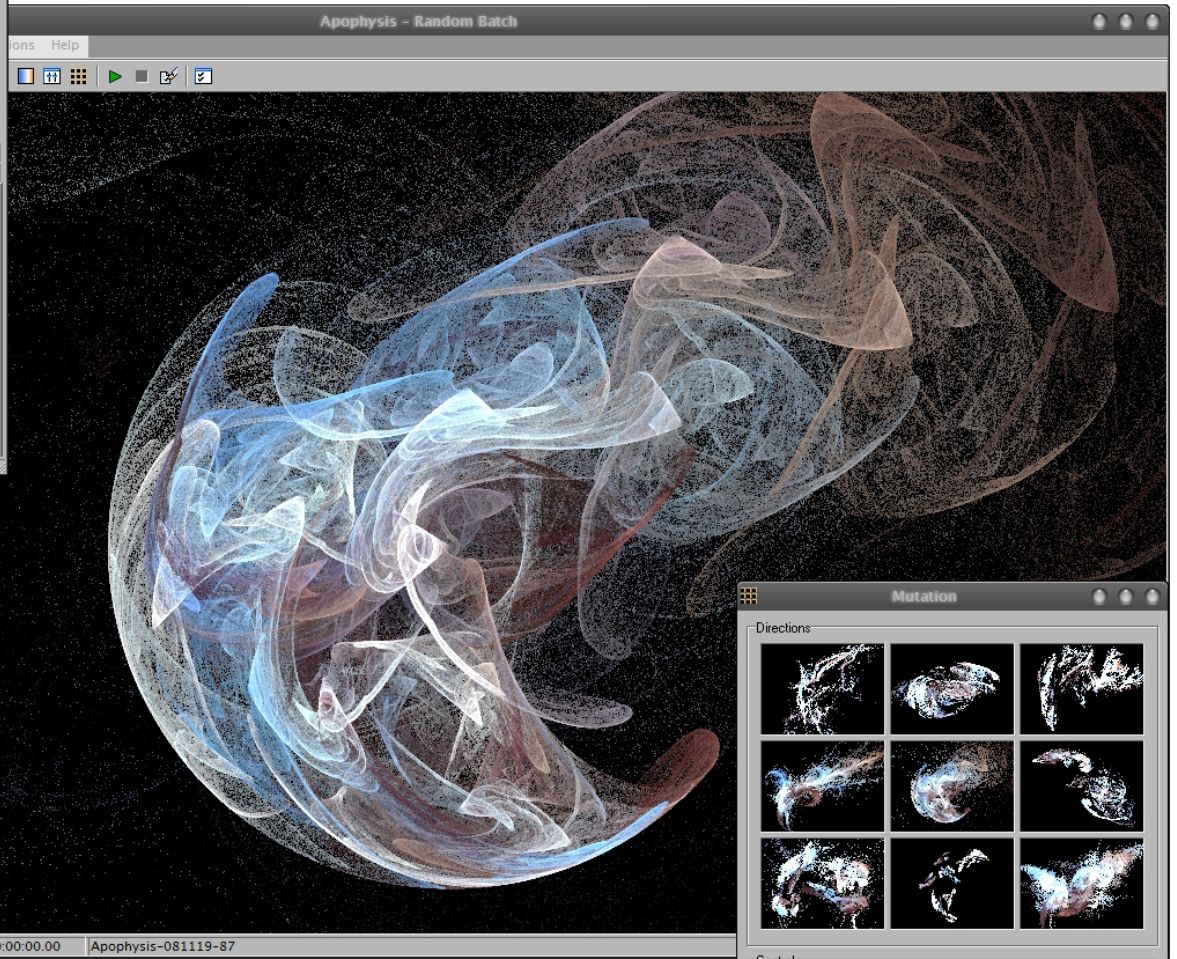
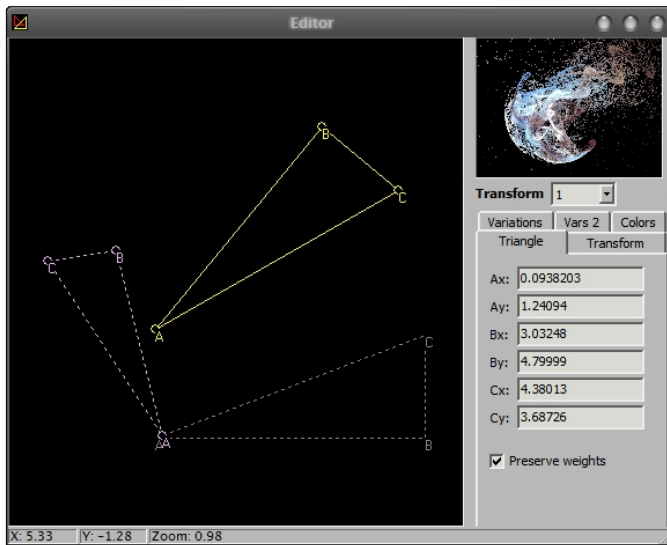
R. Černobíla



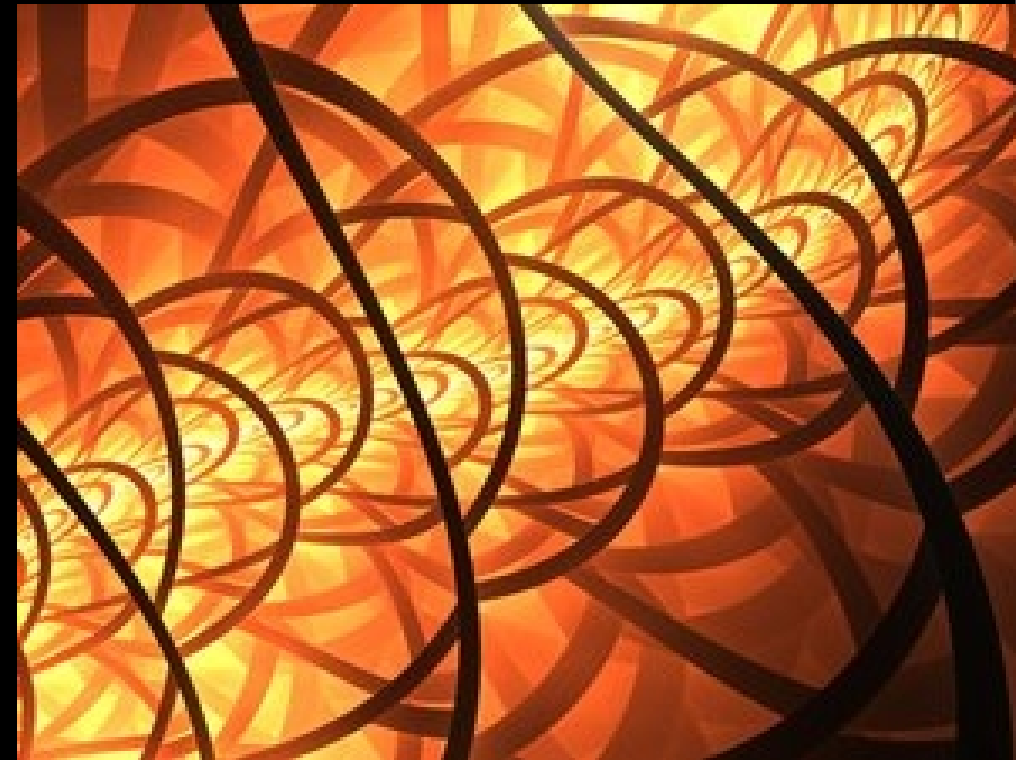
G. R. Exper :
Flowing

© 2008 G. R. "Exper" - exper.3drecursions.com

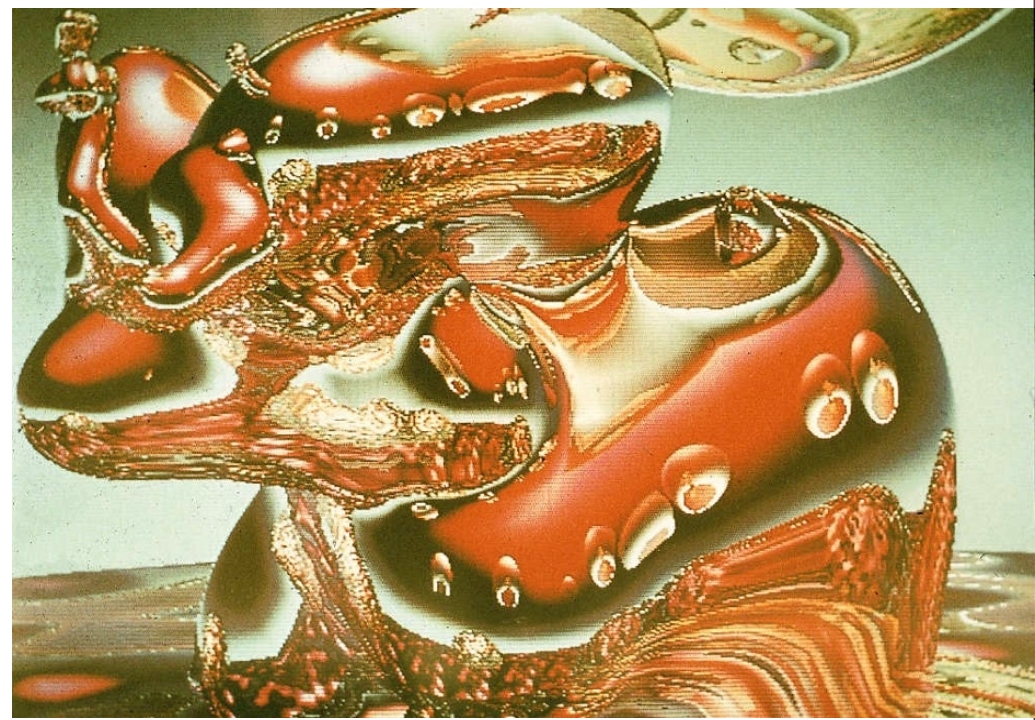
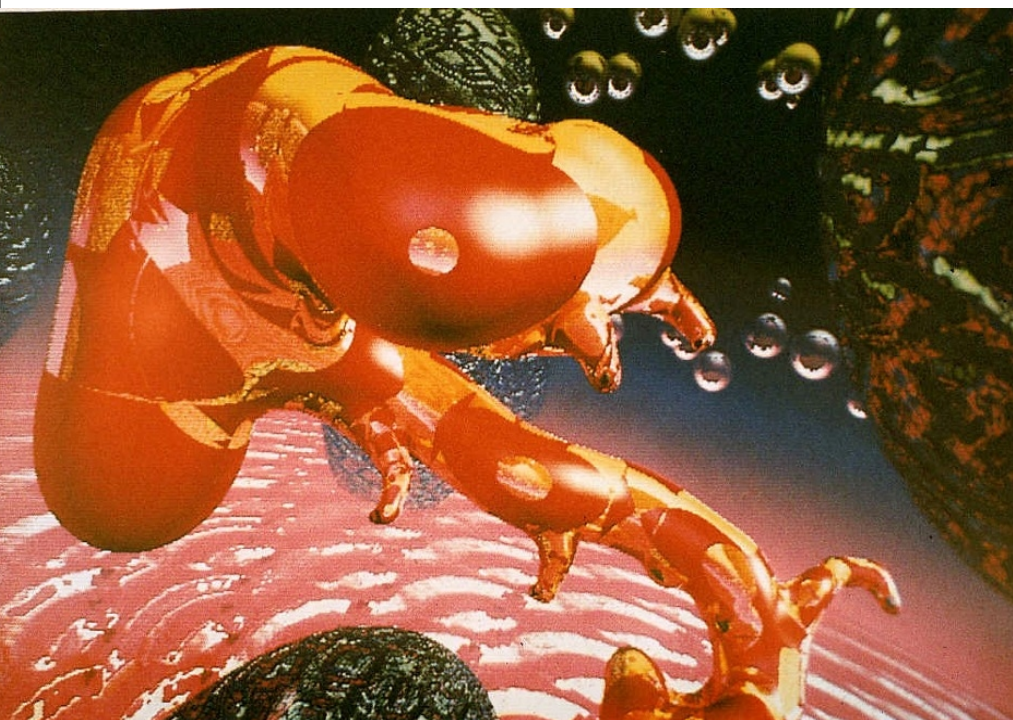
Flowing {Ref. js1-15}



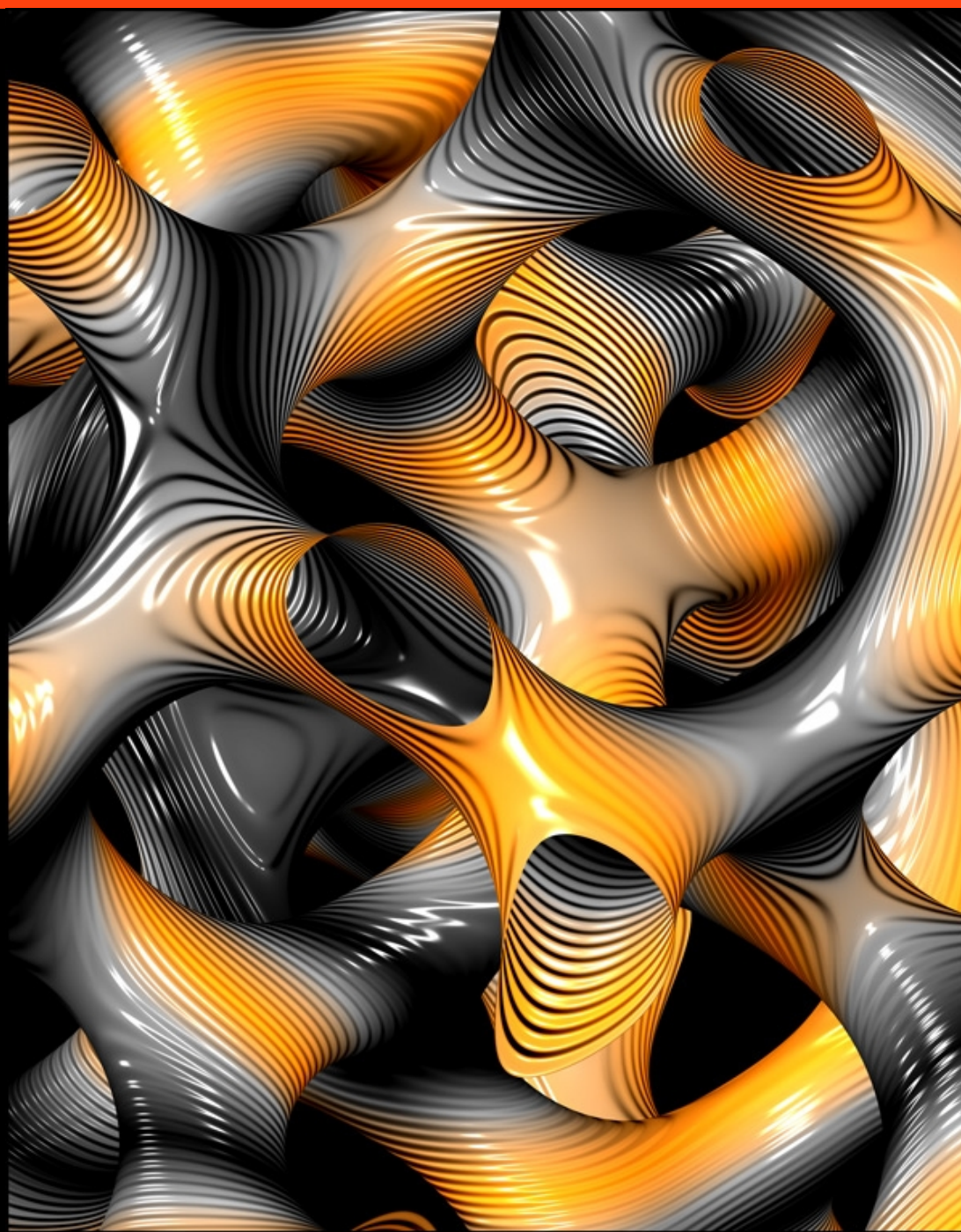
➔ [apophysis.zip](http://www.apophysis.org/)
<http://www.apophysis.org/>



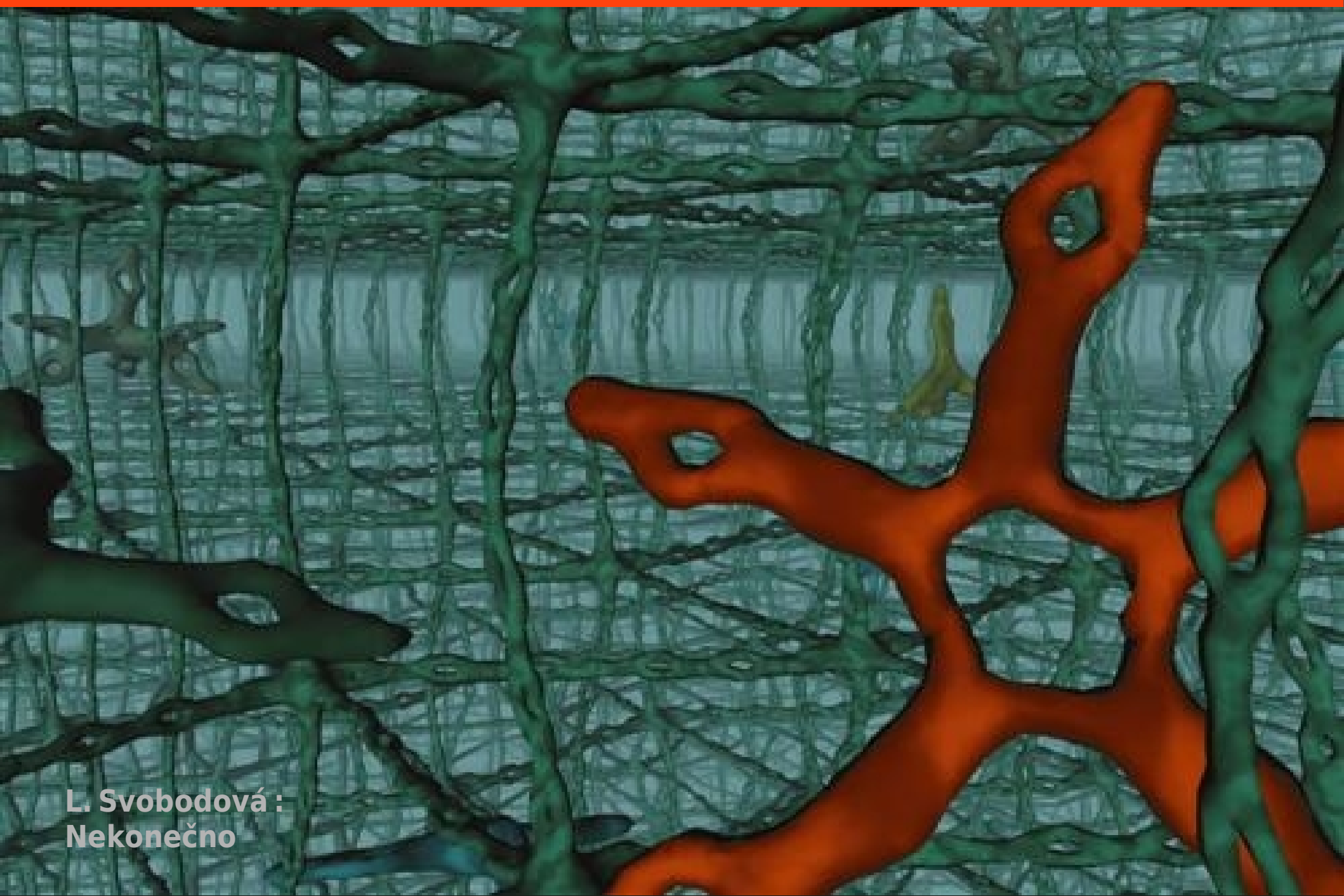
➔ ***electricssheep.zip***
<http://www.electricssheep.org/>



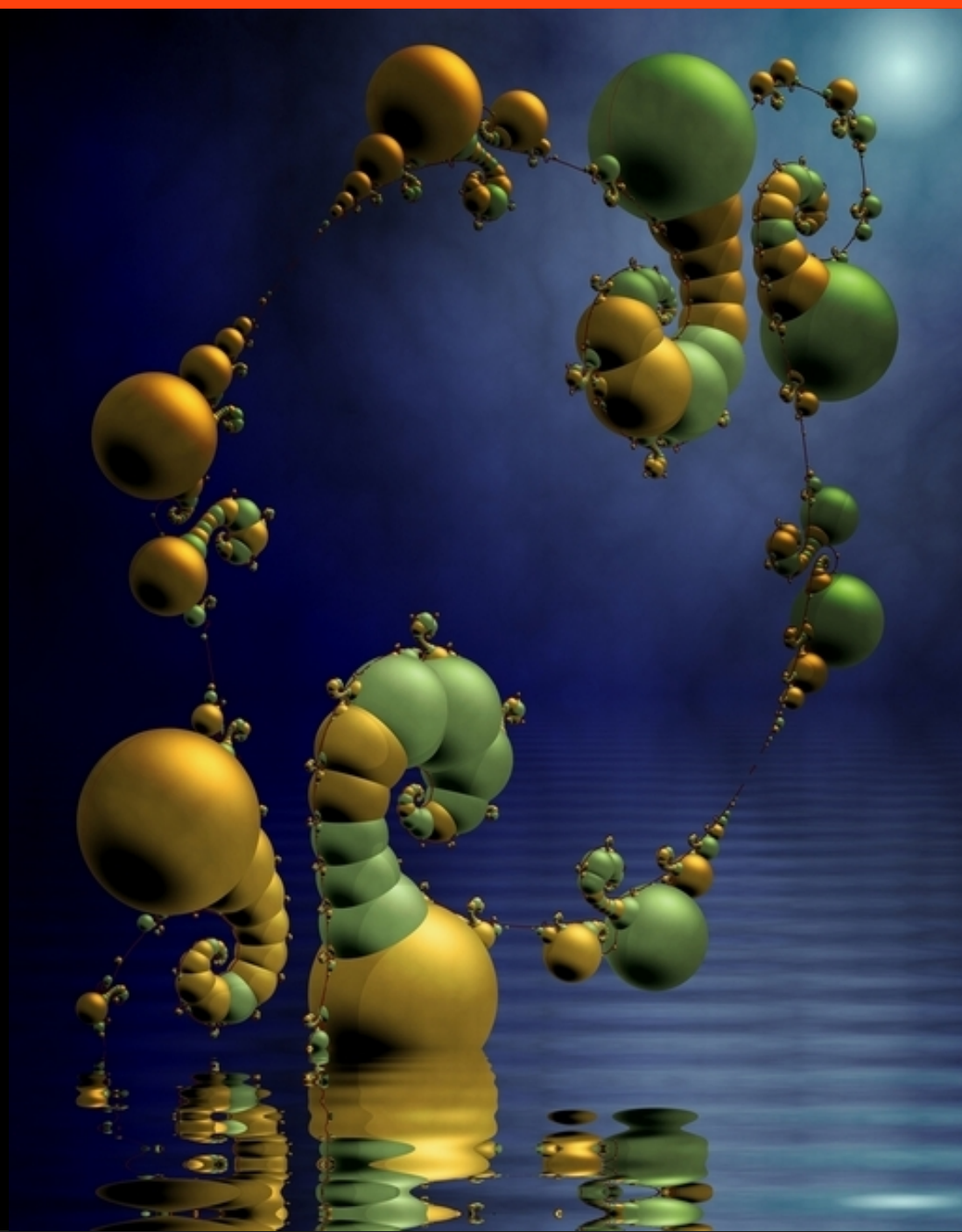
Computer Technique Group Japan



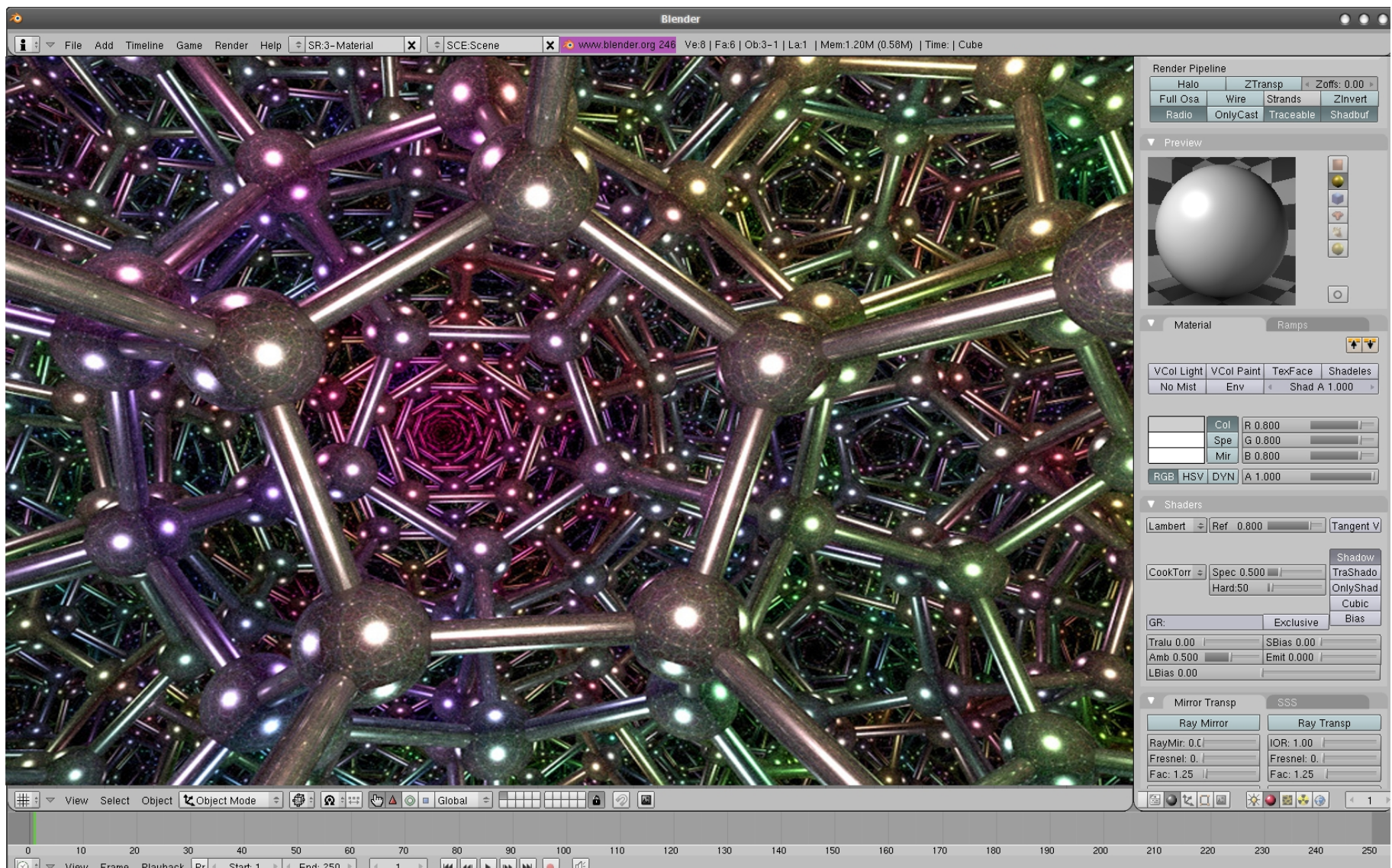
B. Johnston



L. Svobodová :
Nekonečno

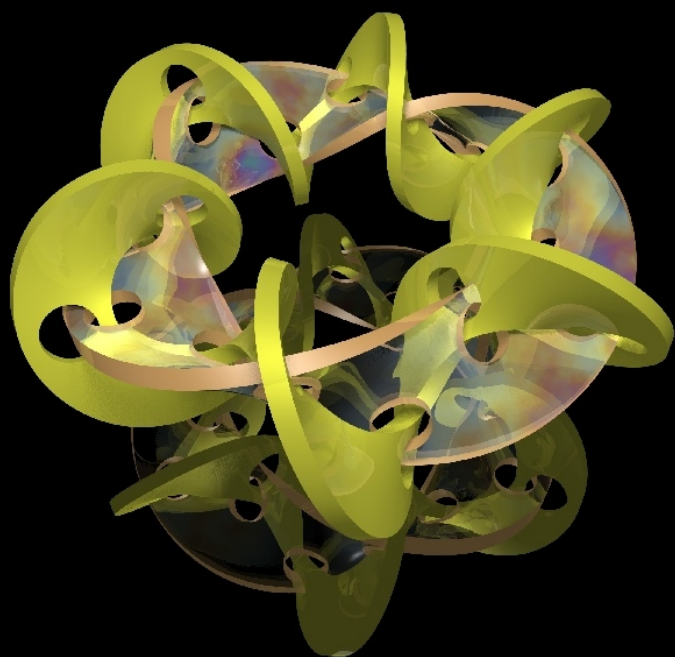


J. Leys

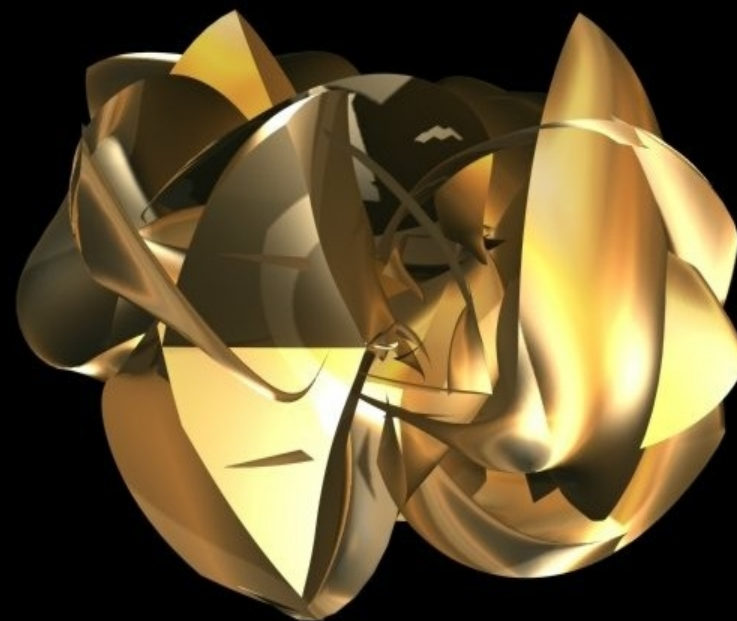


➔ [blender.zip](http://www.blender.org/)
<http://www.blender.org/>

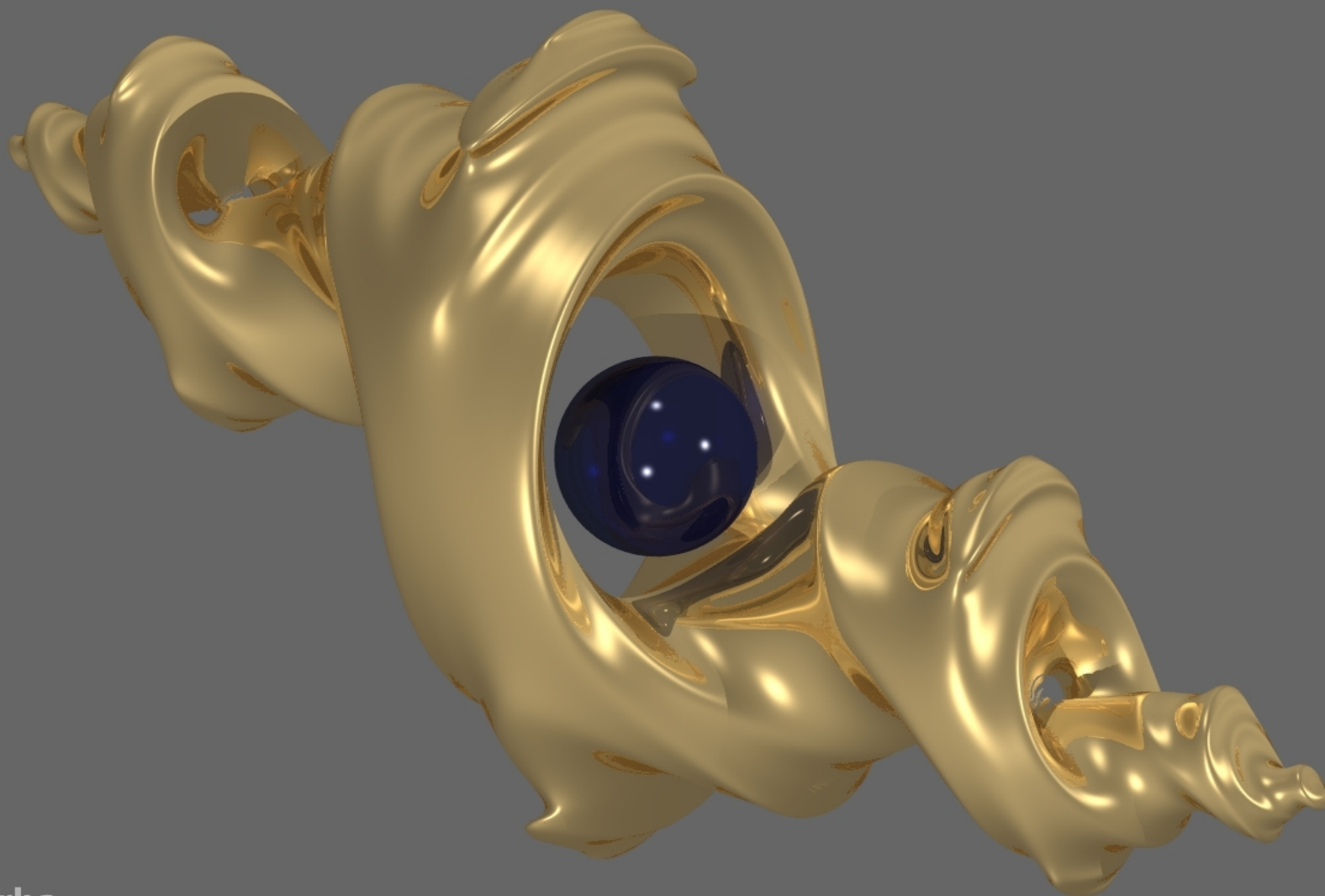
➔ [povray.zip](http://www.povray.org/)
<http://www.povray.org/>



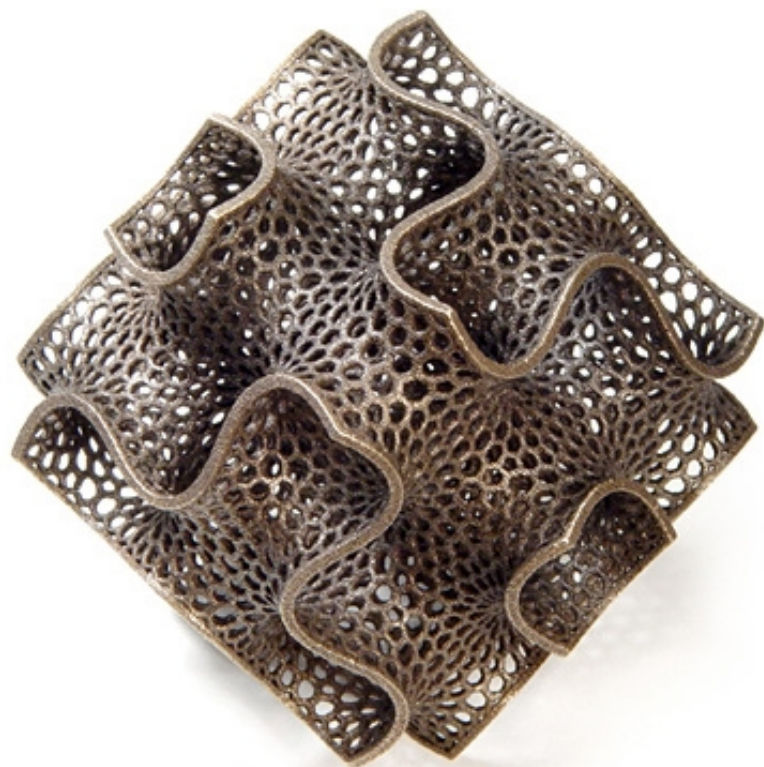
T. Longstin



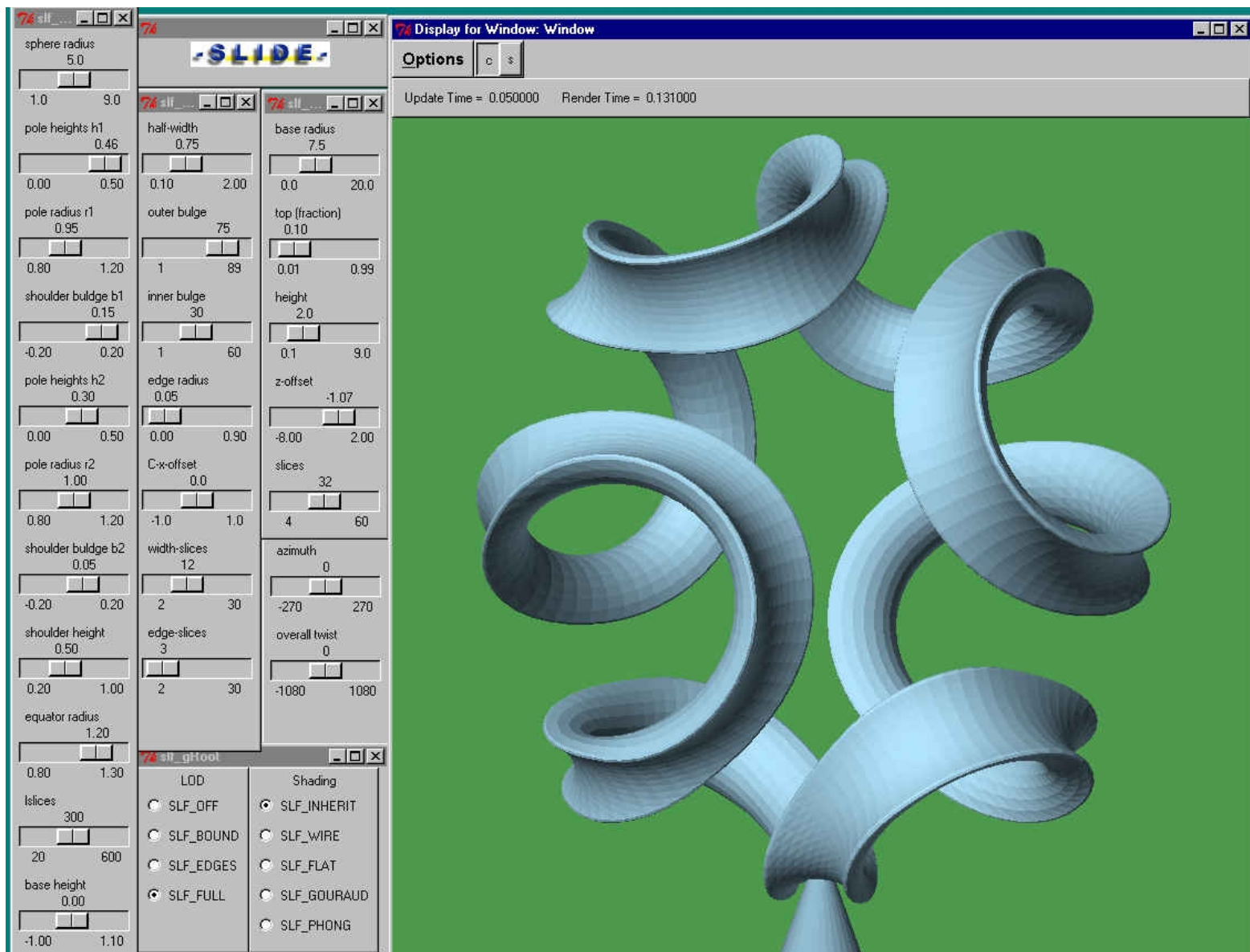
A. Leyton



I. Serba



G. Hart







**B. Collins,
C. Séquin**



- **Bentley, P.J.: *Evolutionary Design by Computers*. Morgan Kaufmann, 1999.**
- **Bruter, C.P.: *Mathematics and Art*. Springer Verlag, 2002.**
- **Emmer M., ed.: *Mathematics and Culture II: Visual Perfection*. Mathematics and Creativity series. Springer Verlag, 2005.**
- **Kapraff, J.: *Connections: The Bridge Between Art and Science*. World Scientific Publishing Company, 2002.**
- **Lunenfeld, P.: *Snap to Grid: A Users' Guide to Digital Arts, Media, and Cultures*. The MIT Press, Cambridge—London, 2000.**
- **Paul, Ch.: *Digital Art (The World of Art)*. Thames & Hudson, 2003.**
- **Peterson, I.: *Fragments of Infinity: A Kaleidoscope of Math and Art*. John Wiley & Sons, 2001.**
- **Sunderland, J.: *Electronic Imaging and the Visual Arts (Computers & the History of Art)*. Routledge, 1997.**