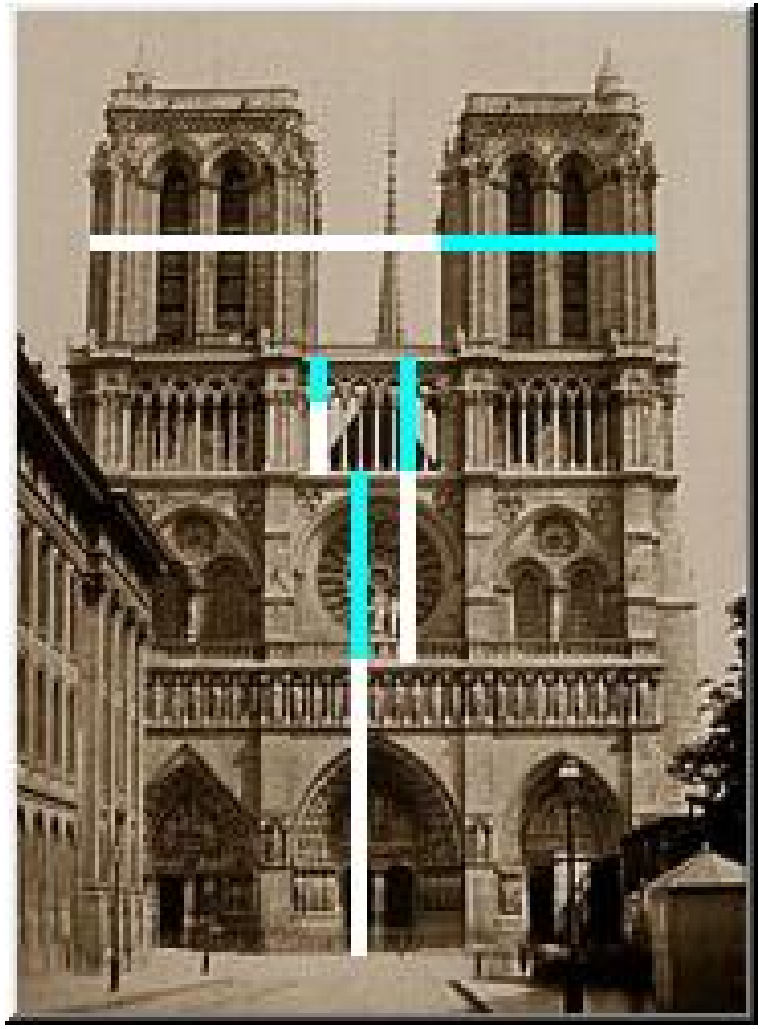
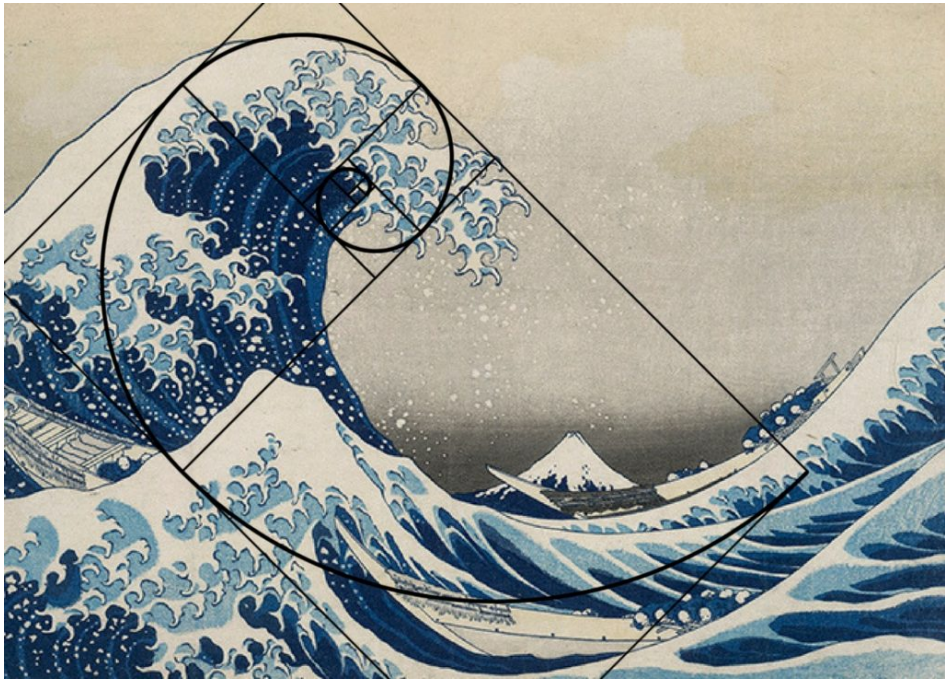
Ottavio Caligaris

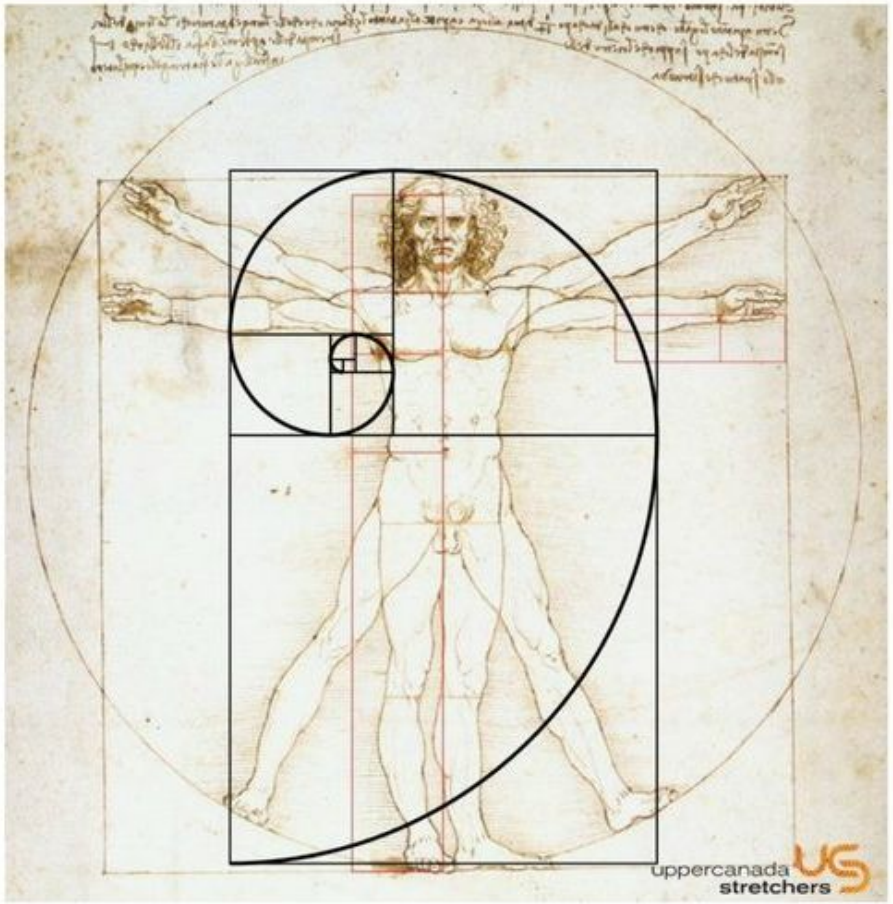
Il Partenone



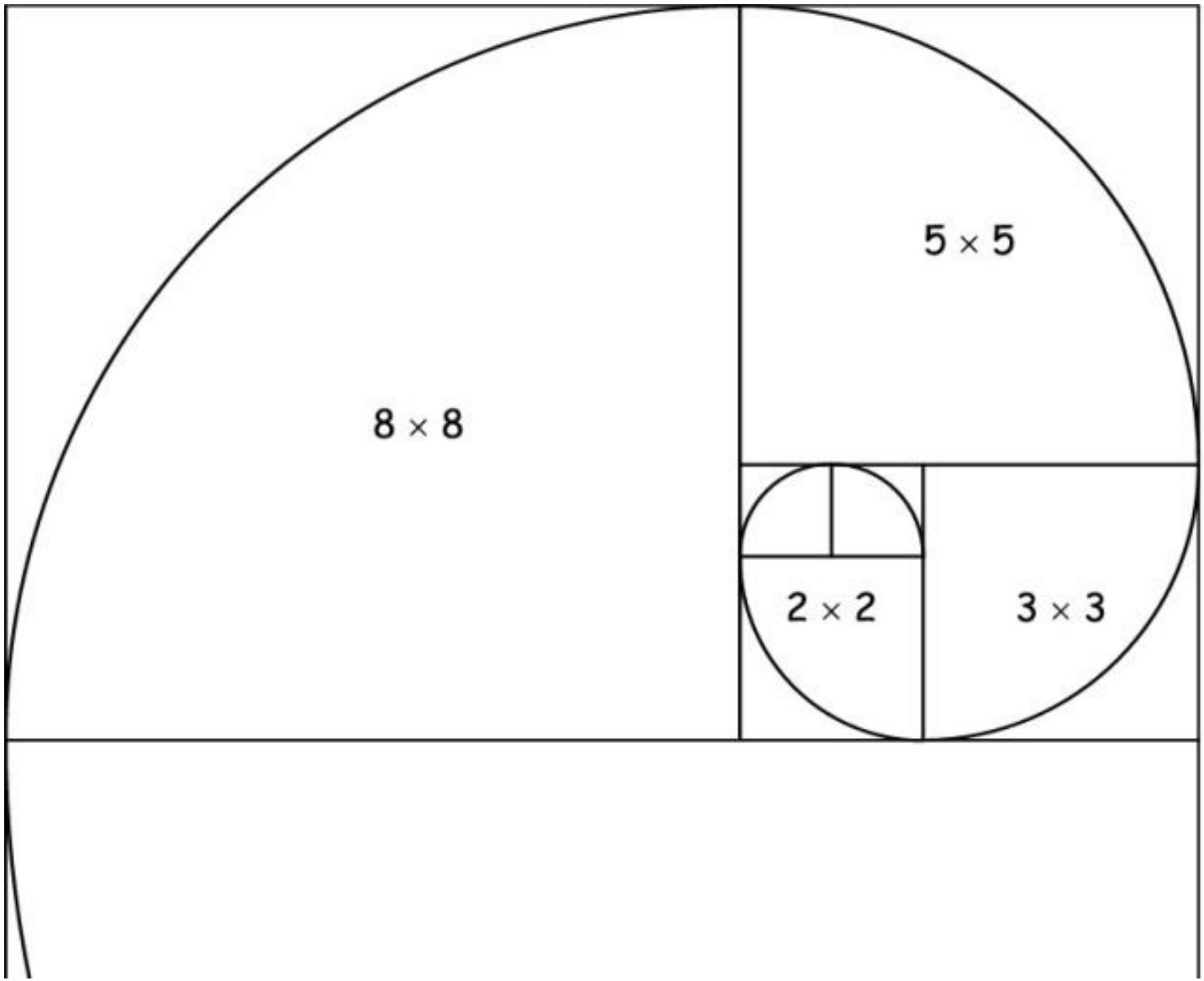
La cattedrale di Notre-Dame

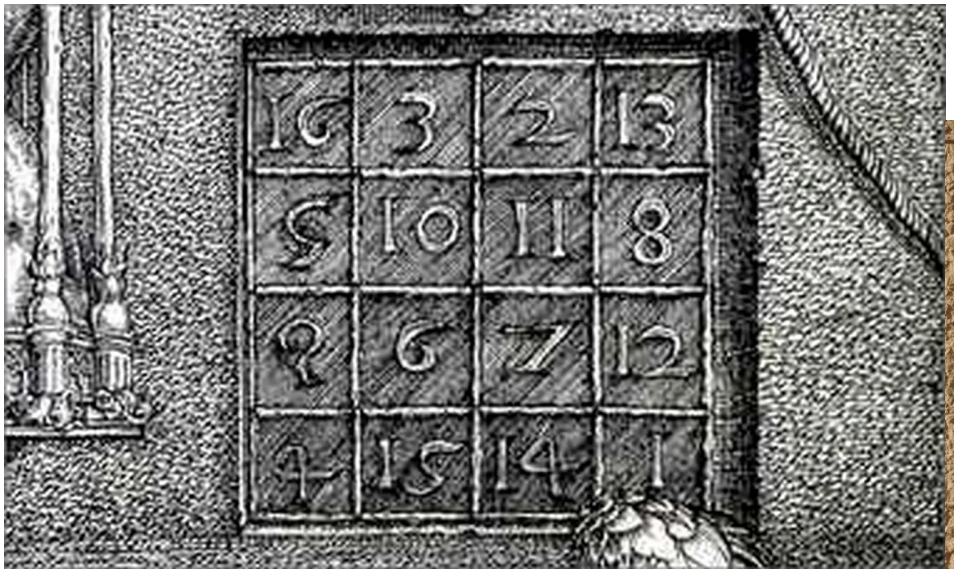


Hokusai- La grande onda di Kanagawa

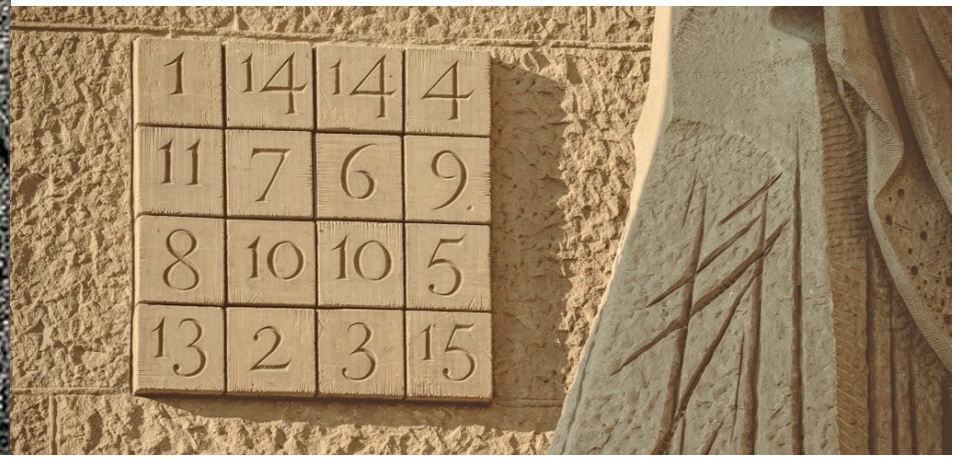


Galileo - L'uomo di Vitruvio


5 × 5
8 × 8
2 × 2
3 × 3



Durer- Melancholia



Subirachs - La sagrada Familia

Matematica e Arte

Matematica e Arte

Matematica e Arte

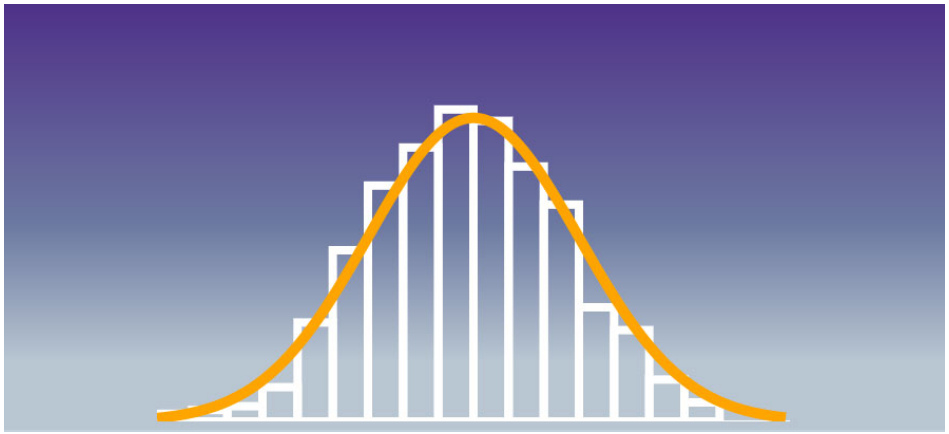
`

Matematica è Arte

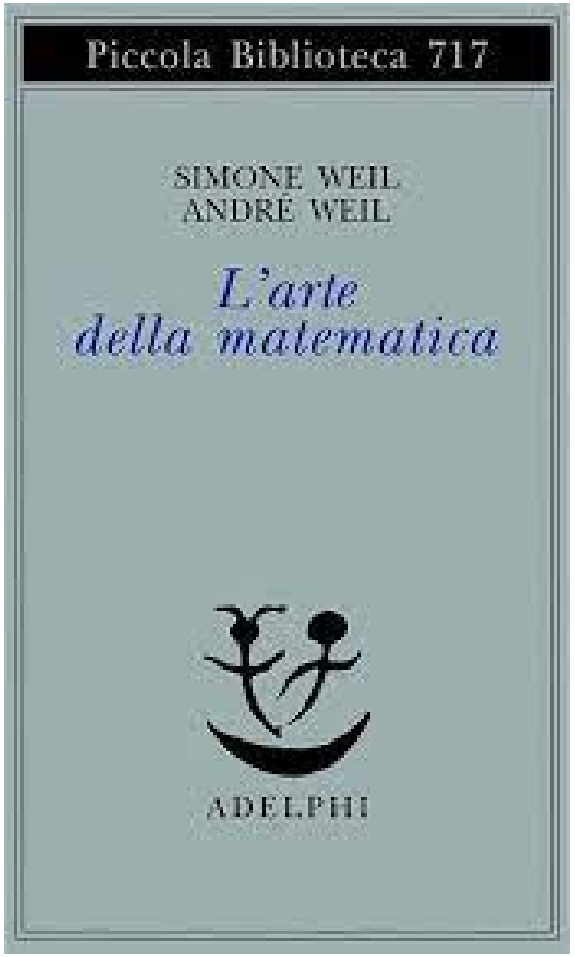
L'arte nel suo significato più ampio comprende ogni attività umana - svolta singolarmente o collettivamente- che porta a forme di creatività e di espressione estetica.

- Maths and Beauty
- The experience of mathematical beauty and its neural correlates

- $$\int_{\partial\Omega} \omega = \int_{\Omega} d\omega$$
- i teoremi di punto fisso
  - Ogni funzione continua definita su un compatto D a valori in D ammette un punto fisso
  - il teorema delle contrazioni
- la Gaussiana e il Teorema del Limite Centrale



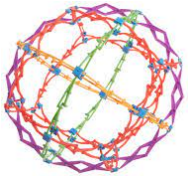
- $$e^{\imath\pi} + 1 = 0$$

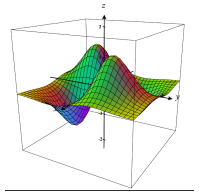


Andé Weil Matematico tra i maggiori sel secolo scorso
Fu tra i fondatori del gruppo Bourbaki

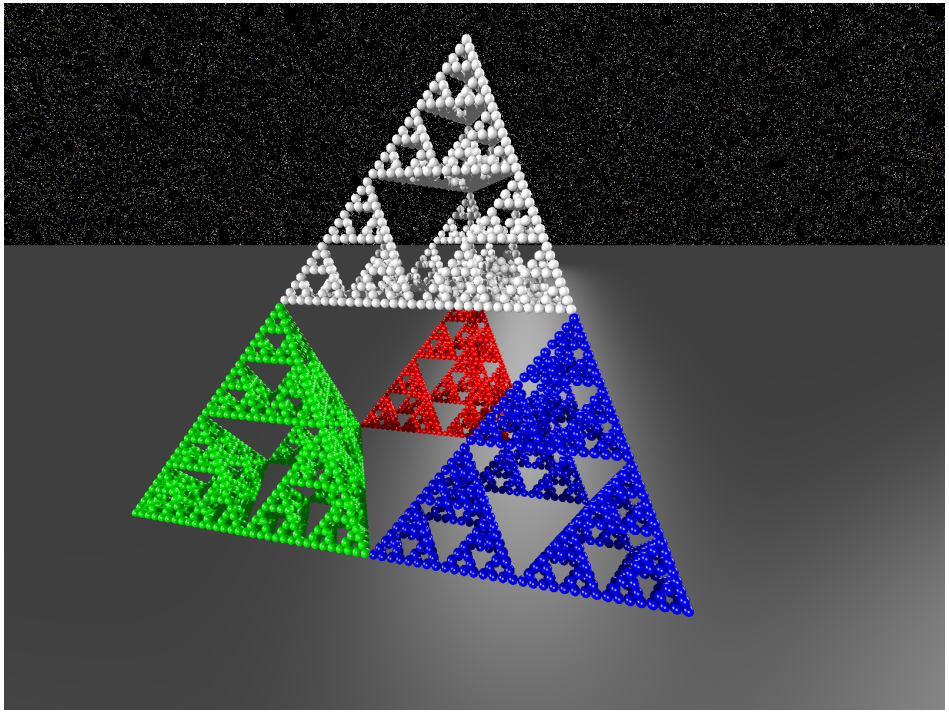
Simone Weil Filosofa e mistica

Virtual Math Museum



CalcPlot3d 

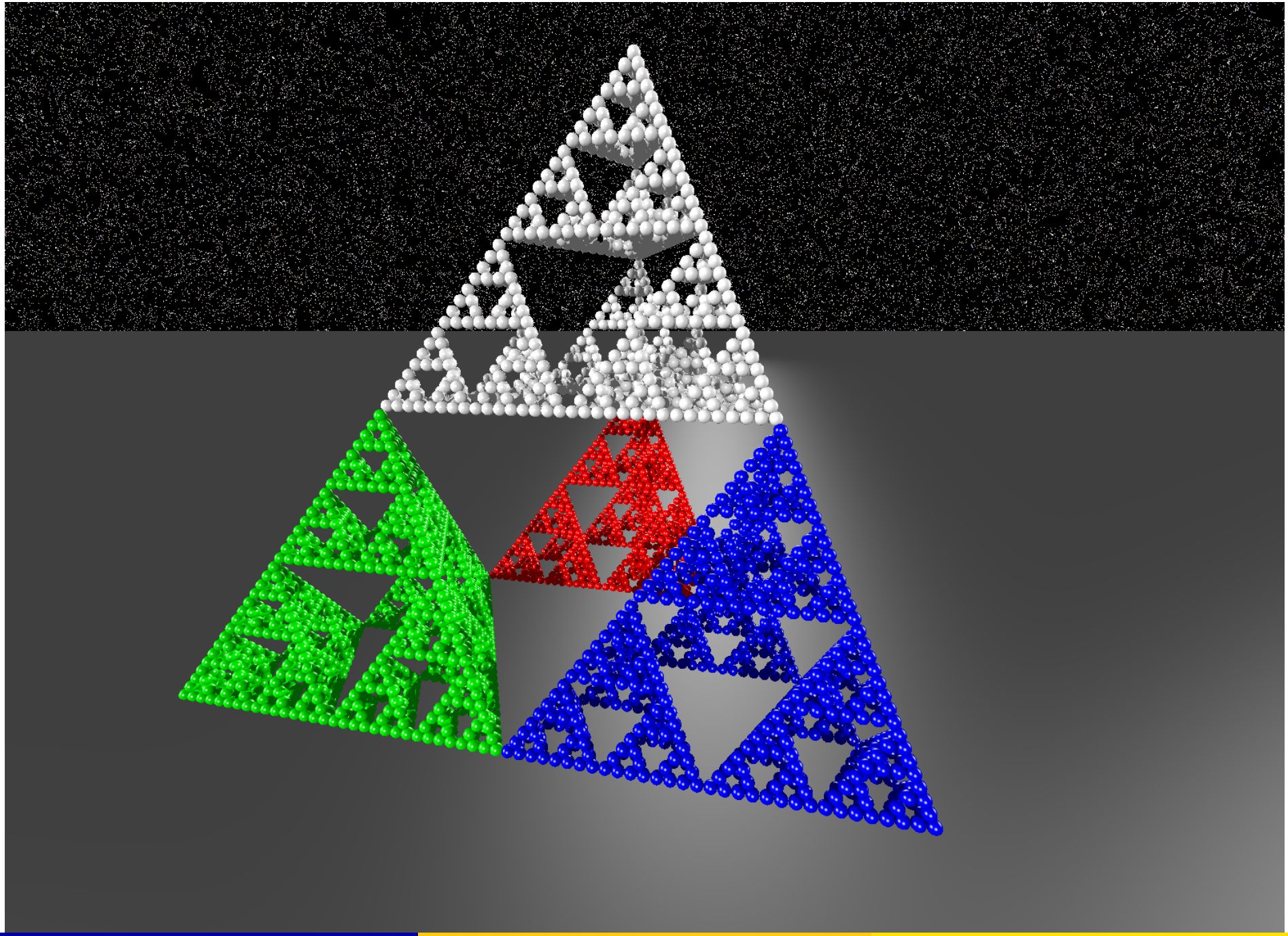
- I(terated) F(unction) S(ystems)

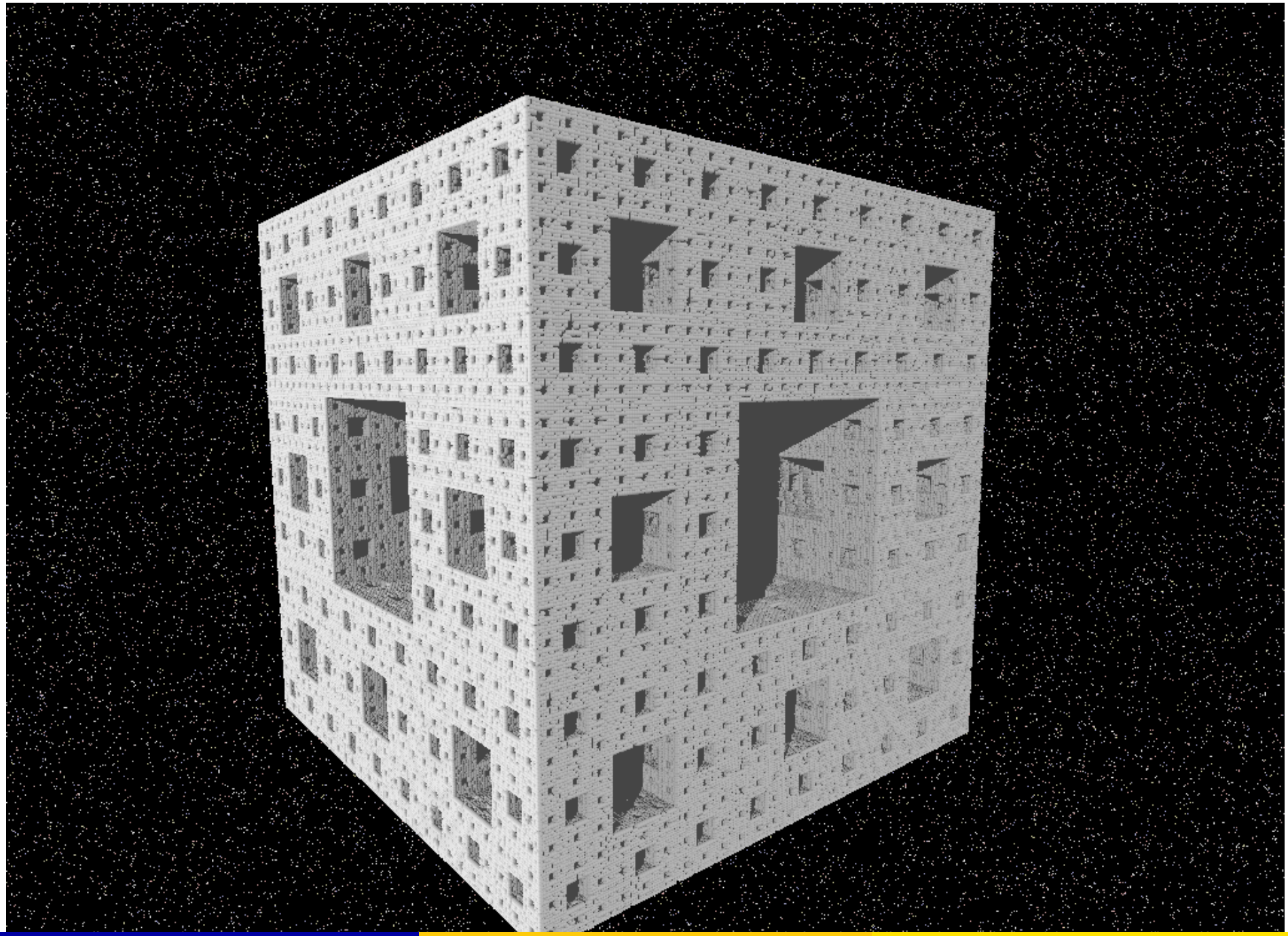


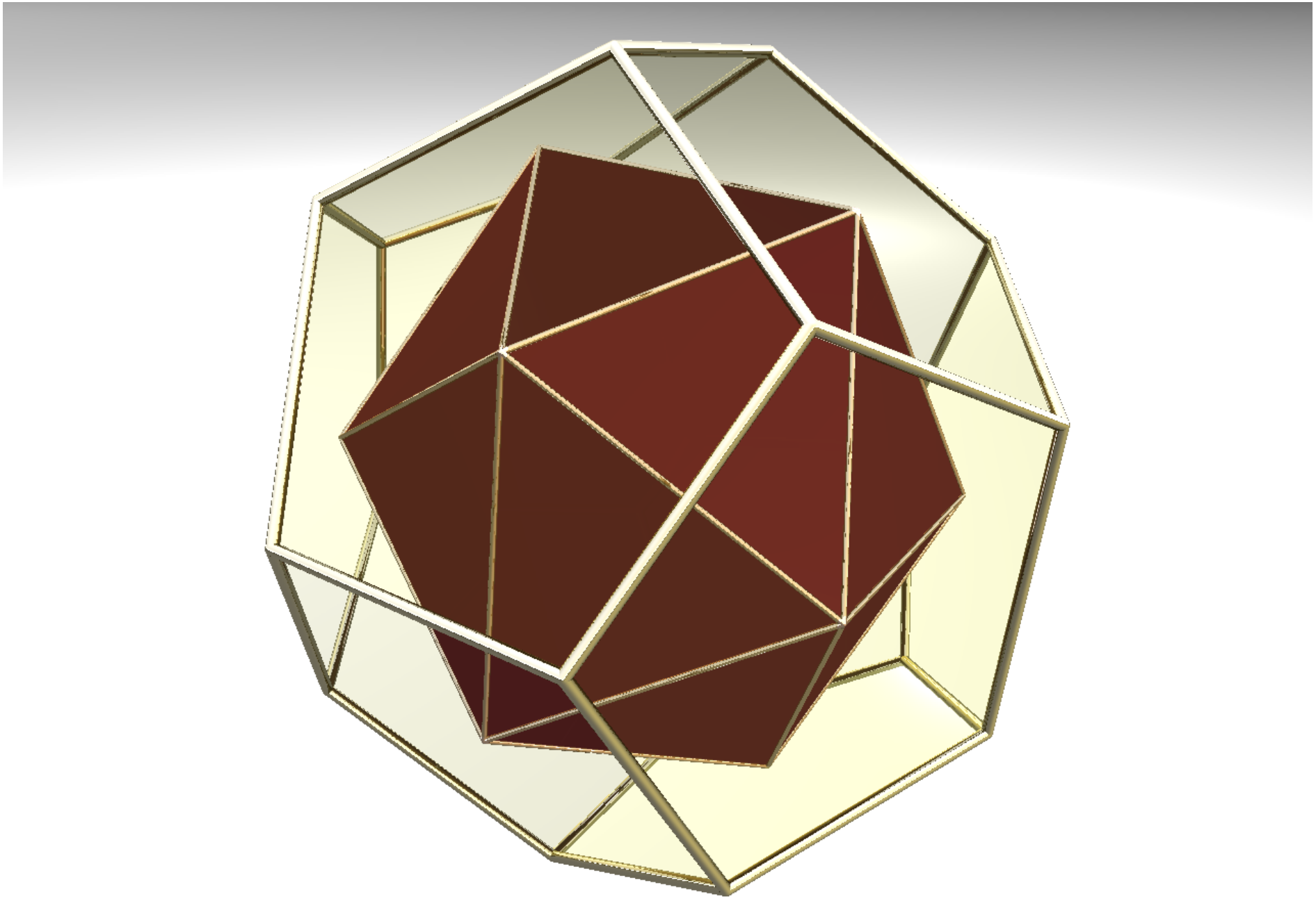
- • Math is Art (https://www.youtube.com/watch?v=Ey-W3xwNJU8)
- • Math Into Art (https://www.youtube.com/watch?v=dzymDsEUjKA&t=71s)
- •3dfractal (https://www.youtube.com/watch?v=S530Vwa33G0)
- •Sierpinski Dream (https://www.youtube.com/watch?v=P5EkdJRtF-4)
- •Sapphires (https://www.youtube.com/watch?v=8cgp2WNNKmQ)
- • Fractal Foundation

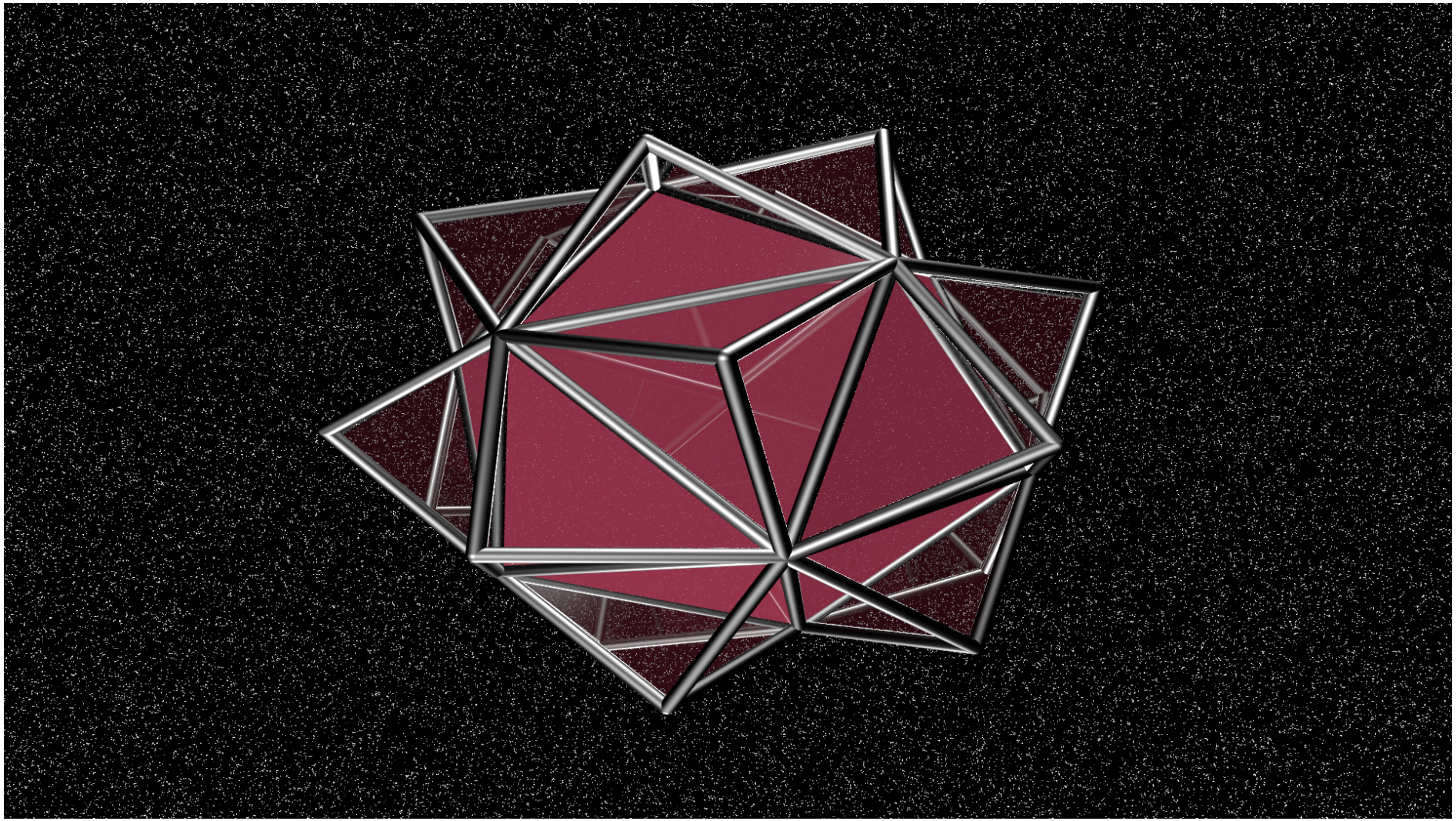
```
#include "colors.inc"
#include "metals.inc"
#include "golds.inc"
#include "textures"
#include "stones"
#include "stars.inc"
sphere{ <0,0,0>, 1 texture{ Starfield3 scale 0.25}
scale 10000}
light_source { <30,10,-20> color rgb <1.0, 1.0, 1>}
light_source { <-30,10,-20> color rgb <1.0, 1.0,
1.0> }
light_source { <-30,10,20> color rgb <1.0, 1.0, 1.0>
}
light_source { <30,10,20> color rgb <1.0, 1.0, 1.0>
}
light_source { <30,-40,0> color rgb <1.0, 1.0, 1.0>
}
camera {
location <1,.5,.9>
look_at < 0,.1,0>
angle 103
}
#declare Y_Gr =pigment { gradient x+y
color_map {
 [0.00 rgb <1,0,0>]
 [0.33 rgb <0,0,1>]
 [0.66 rgb <0,1,0>]
 [1.00 rgb <1,0,0>]
}
}
plane { y, -1.0
texture { pigment { color rgb <.5 .5 .5> }
finish { specular 0.4 reflection 0 diffuse 0.0 } }
}
#declare atm = sphere{<0,0,0> ,1 }
#declare Rnd_1 = seed (314159);
```

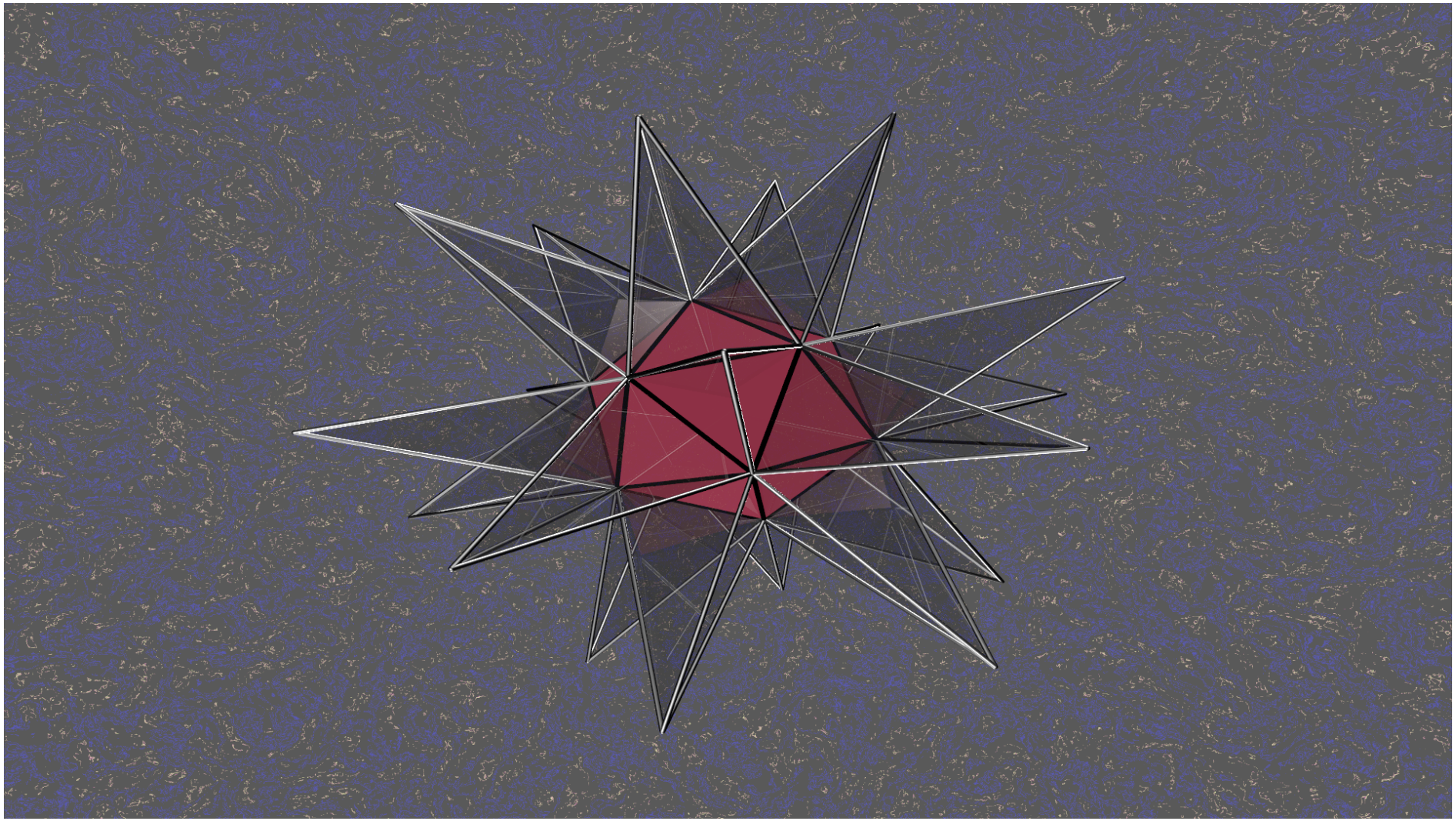
```
#declare a1=array[4]{1/2 , 1/2 , 1/2 , 1/2 };
#declare b1=array[4]{0 0 0 0 };
#declare c1=array[4]{0 0 0 0 };
#declare a2=array[4]{0 0 0 0 };
#declare b2=array[4]{1/2 1/2 1/2 1/2 };
#declare c2=array[4]{0 0 0 0 };
#declare a3=array[4]{0 0 0 0 };
#declare b3=array[4]{0 0 0 0 };
#declare c3=array[4]{1/2, 1/2 , 1/2 , 1/2 };
#declare uu=array[4]{0 1/2 1/4 1/4 };
#declare vv=array[4]{0 0 0 sqrt(6)/6 };
#declare ww=array[4]{0 0 sqrt(3)/4 sqrt(3)/8};
#declare p=array[4]{1/4 2/4 3/4 4/4 };
#declare Npt=1000000;
#declare Itrz=6;
#declare aaa=union{
#declare Np=0;
#while (Np<= Npt)
#declare atm = sphere {<0,0,0>,.5 }
#declare Ite=0;
#while(Ite<Itrz)
#declare Rch=rand(Rnd_1);
#switch(Rch)
#range(0,p[0]) #declare i=0;
#declare Coloratm=rgb <1,0,0>; #break ;
#range(p[0],p[1]) #declare i=1;
#declare Coloratm=rgb <0,1,0>; #break ;
#range(p[1],p[2]) #declare i=2;
#declare Coloratm=rgb <0,0,1>; #break ;
#range(p[2],p[3]) #declare i=3;
#declare Coloratm=rgb <1,1,1>; #break ;
#end
#declare AtmT= object { atm
matrix < a1[i], a2[i] , a3[i],
b1[i], b2[i], b3[i],
c1[i], c2[i], c3[i],
uu[i] , vv[i], ww[i] >
}
#declare atm= AtmT;
#declare Ite=Ite+1;
#end
object{atm
pigment {Coloratm }
finish {phong 1}
}
#declare Np=Np+1;
#end }
object{aaa }
```

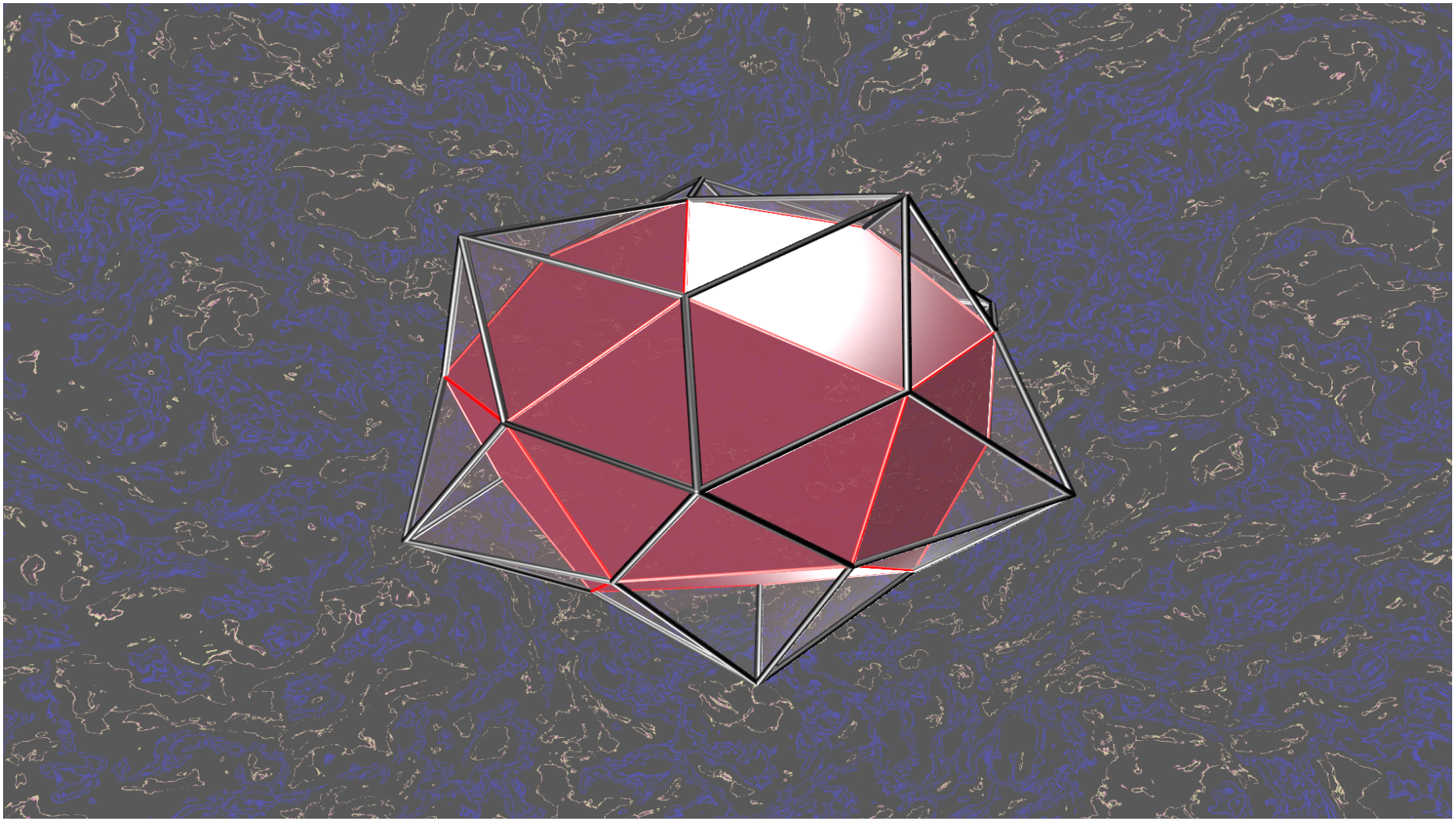


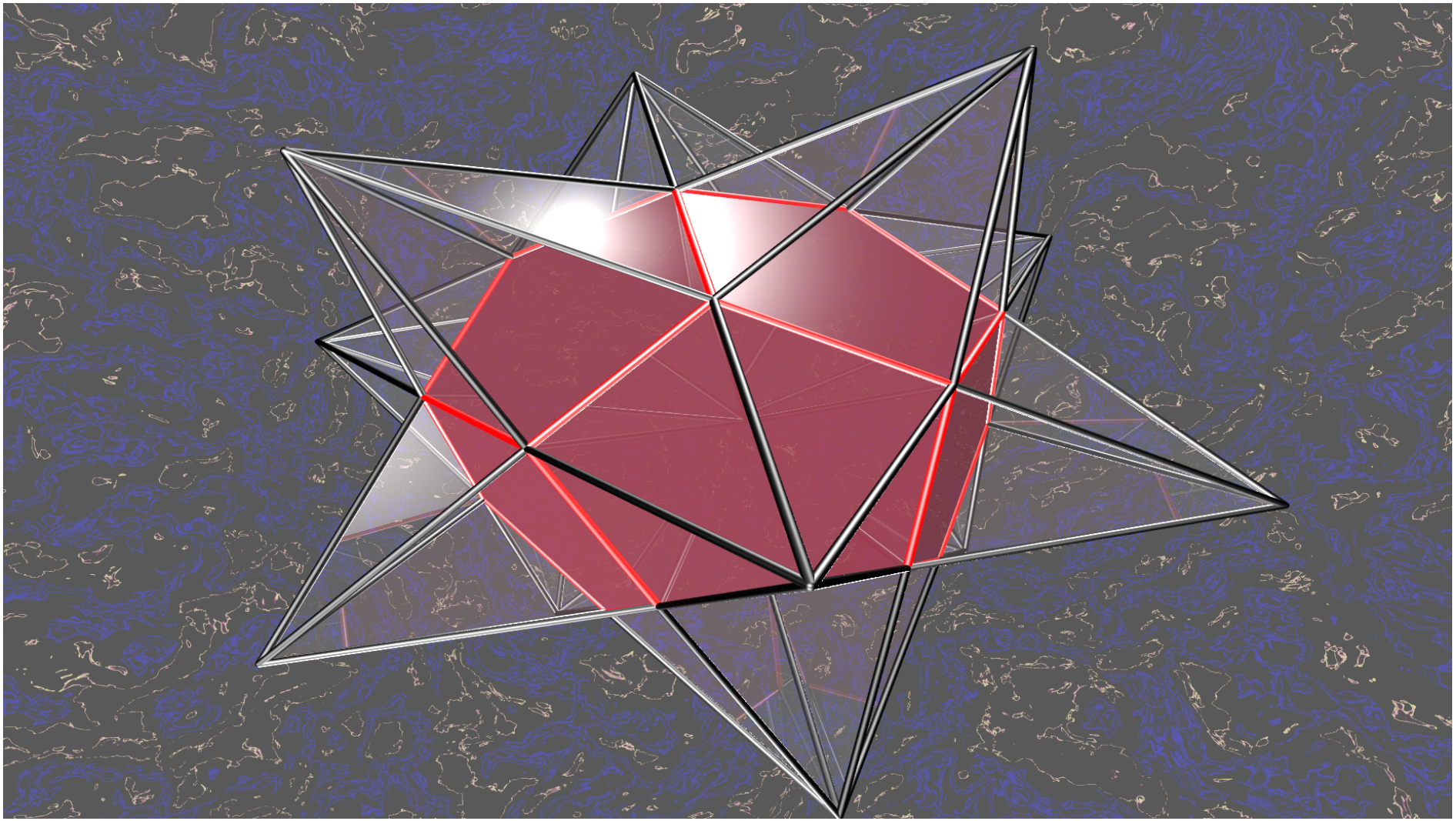


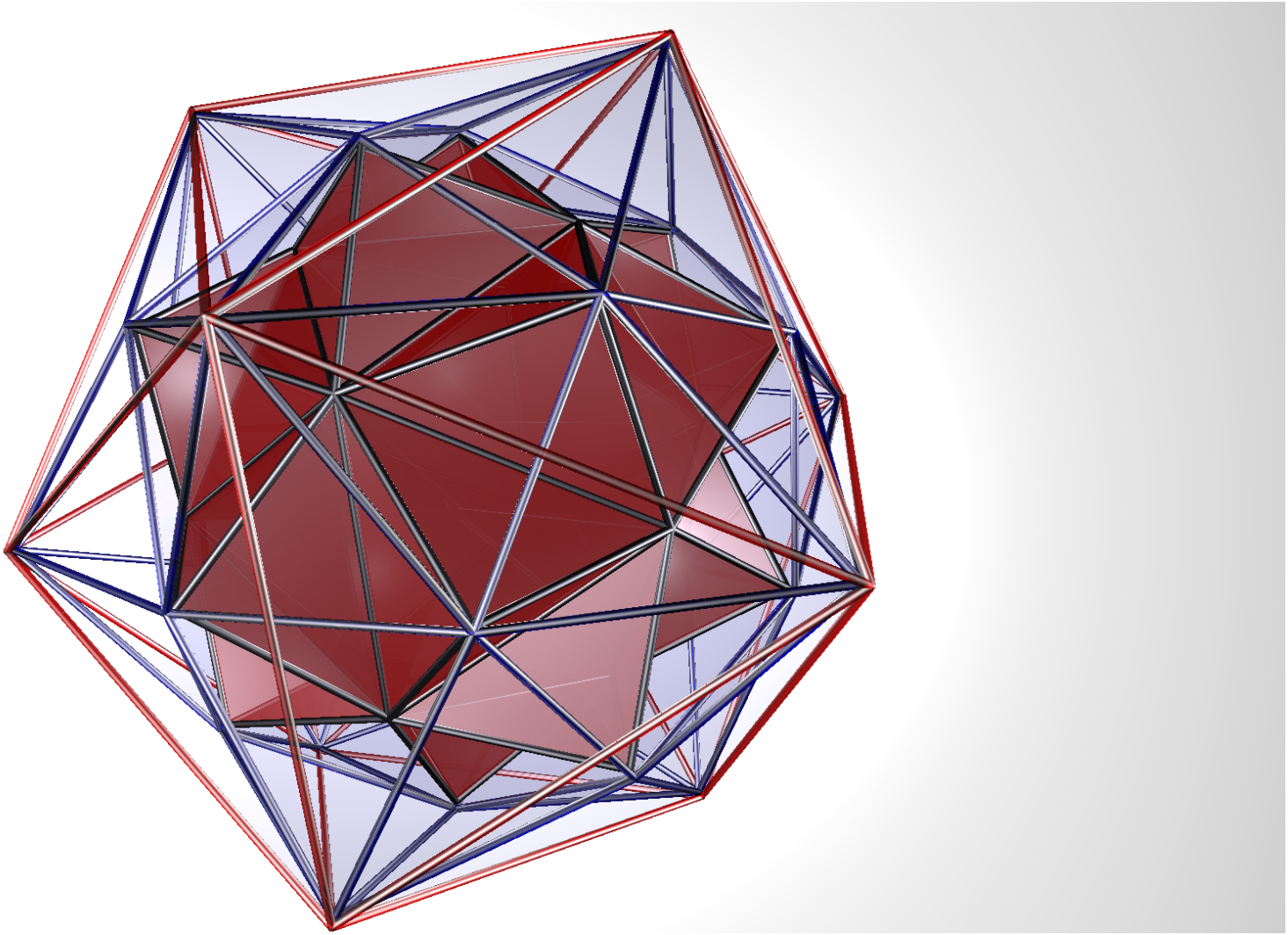


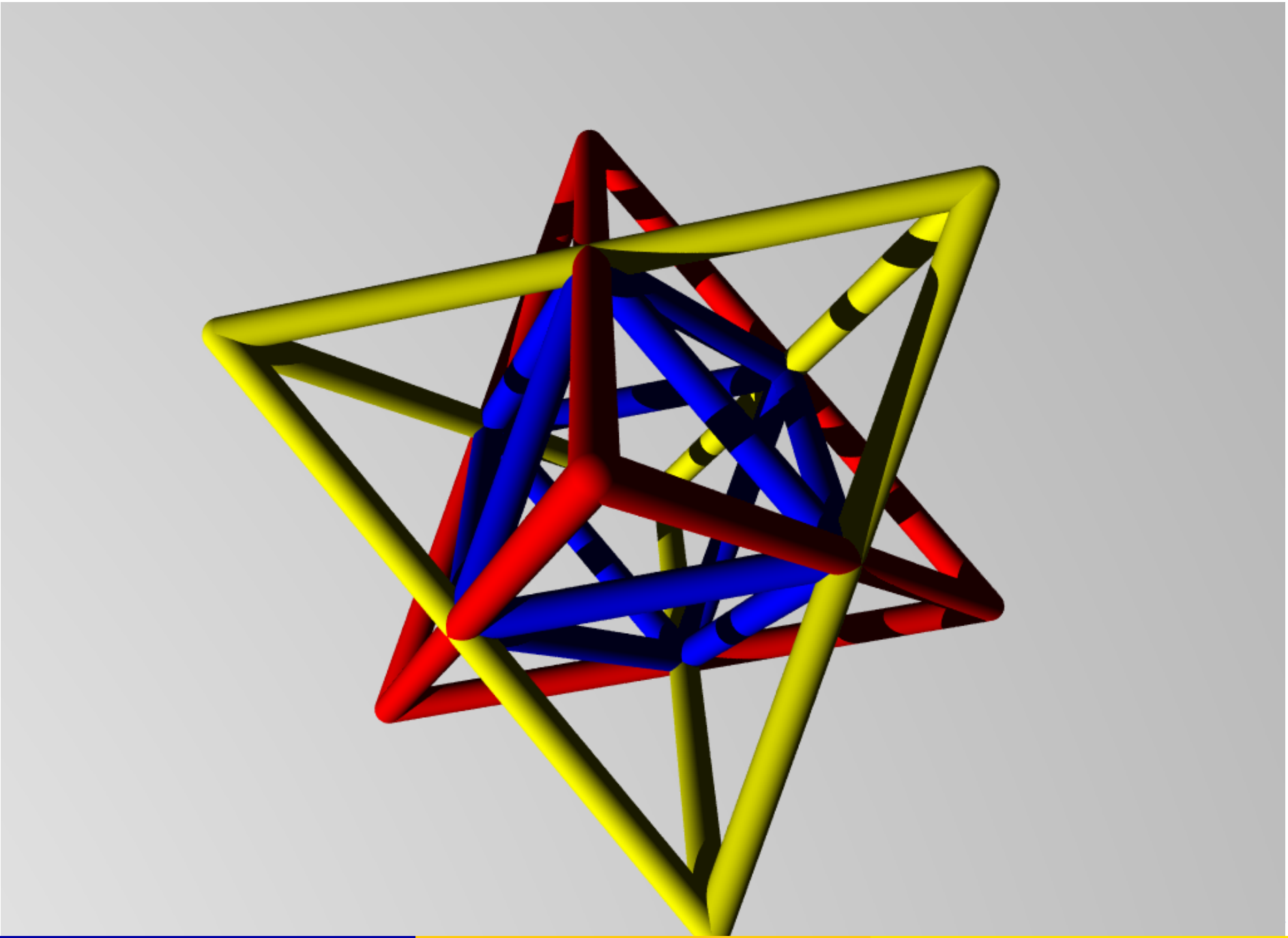


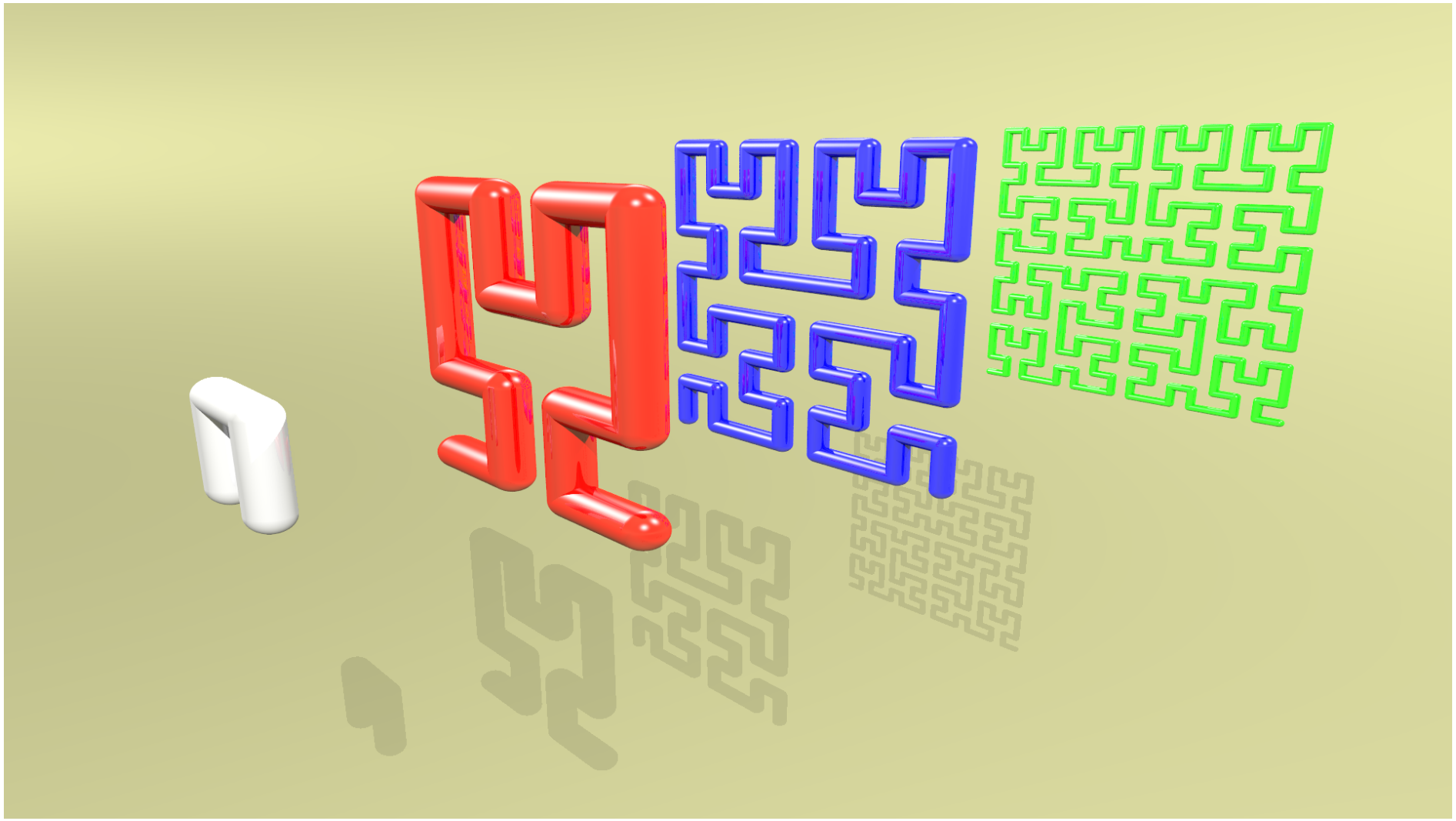












A.L.I.MA.