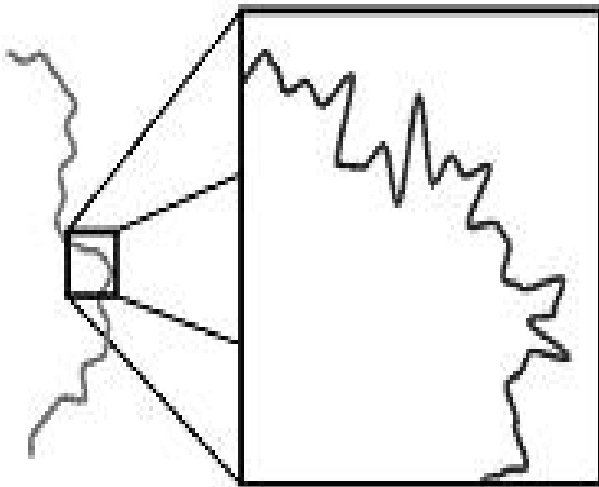
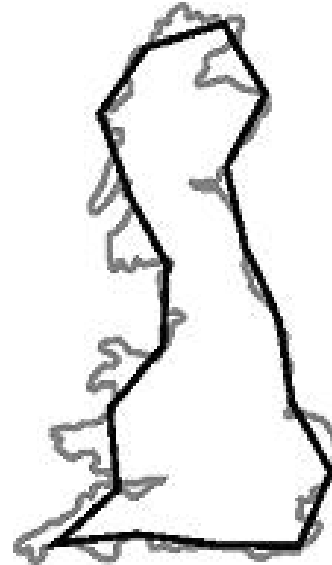


Stochastic processes and fractals

Soós Anna
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1967 Benoit Mandelbrot: "How long is the coast of Britain?", *Nature*



Mandelbrot: geometrical object having [deterministic or stochastic] similarity properties

Mathematically: sets having noninteger Hausdorff dimension

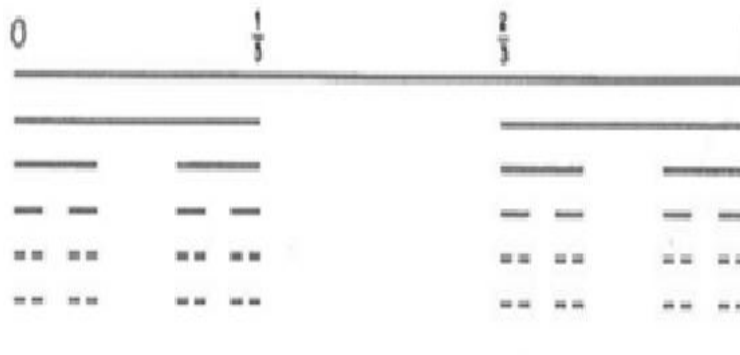


Figure 1: Cantor-dust

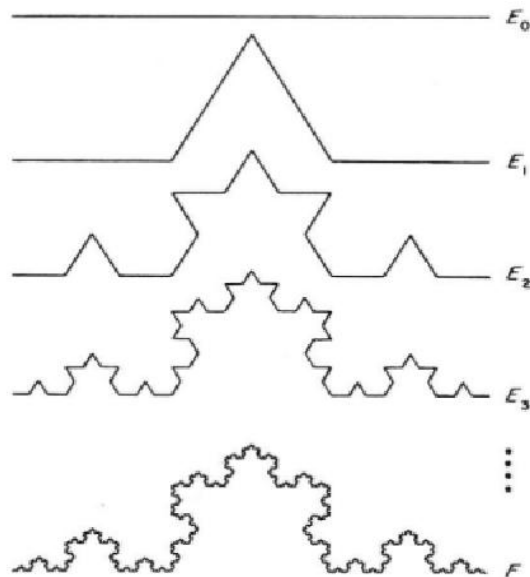


Figure 2: Koch-curve [Mathematical coast]

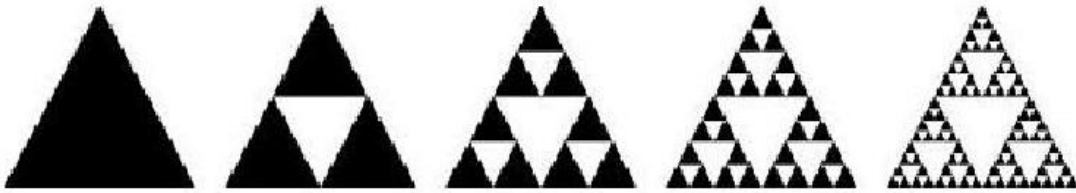


Figure 3: Sierpinski gasket

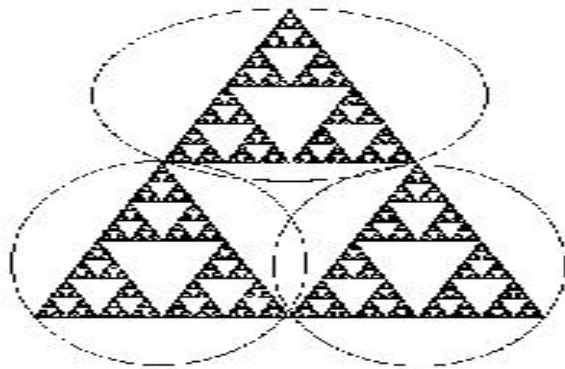
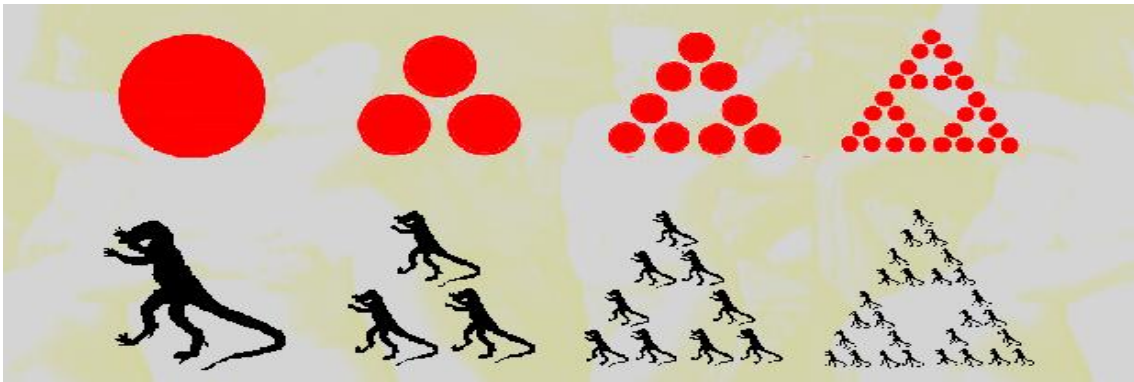


Figure 4: selfsimilar sets



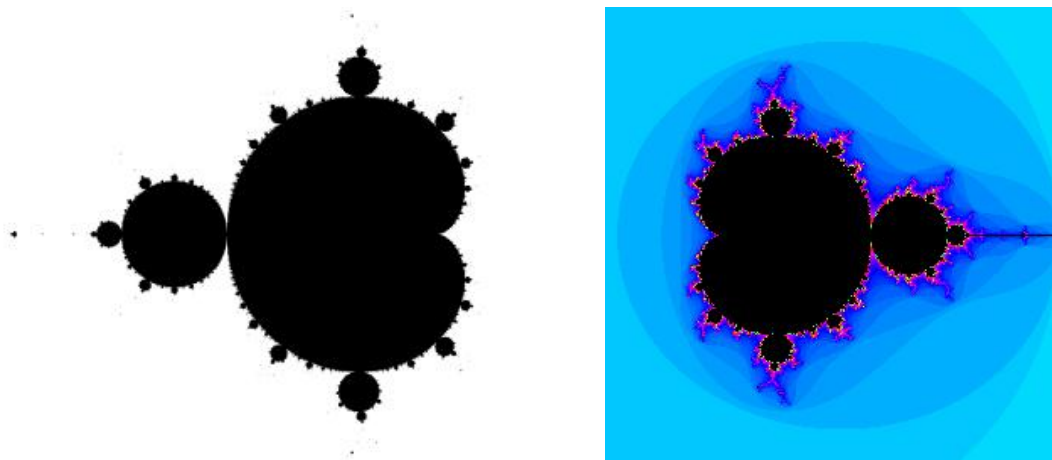
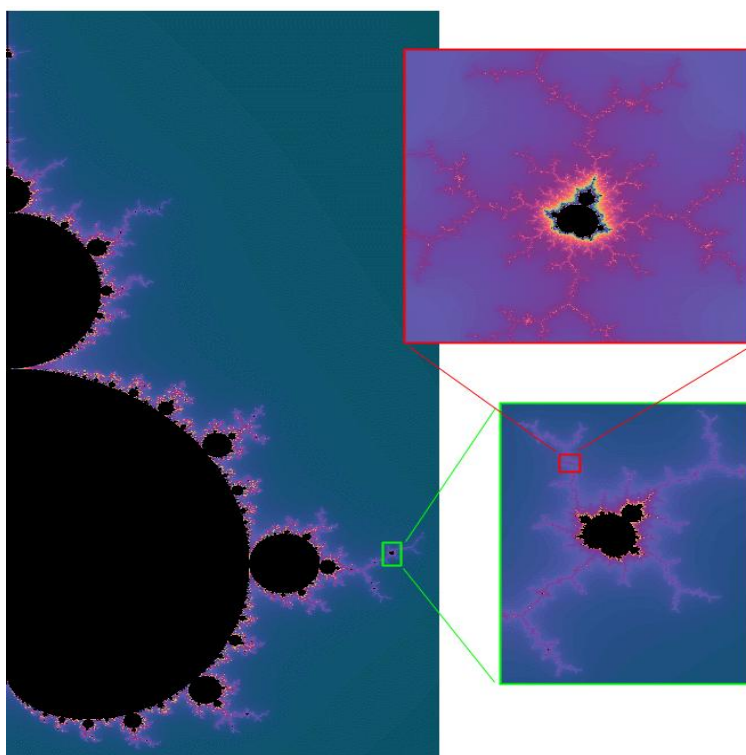


Figure 5: Mandelbrot set



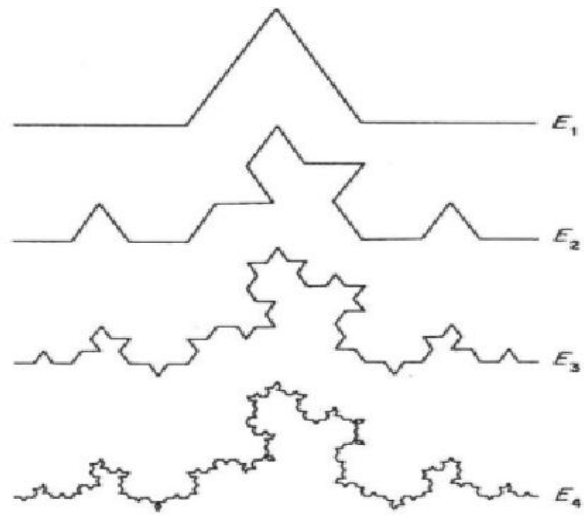
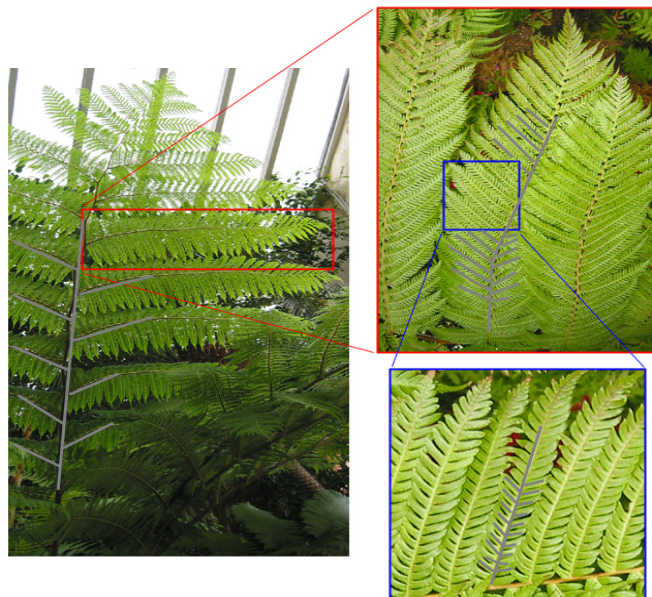


Figure 6: Random Koch



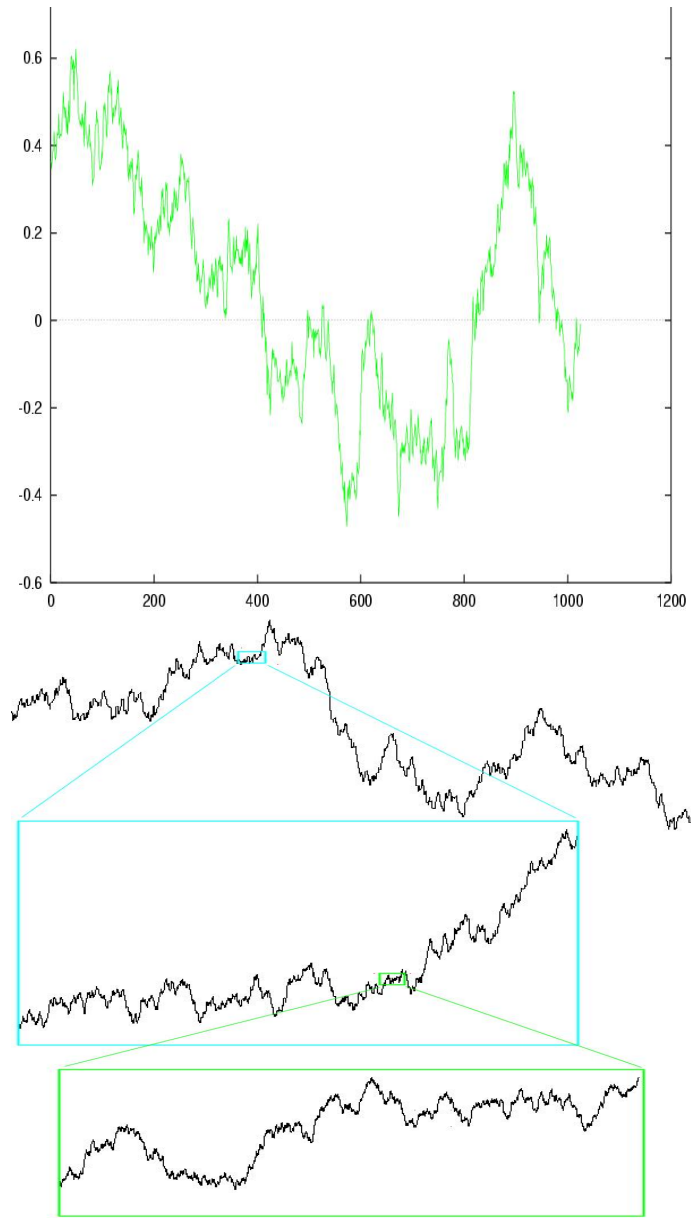


Figure 7: Brownian motion

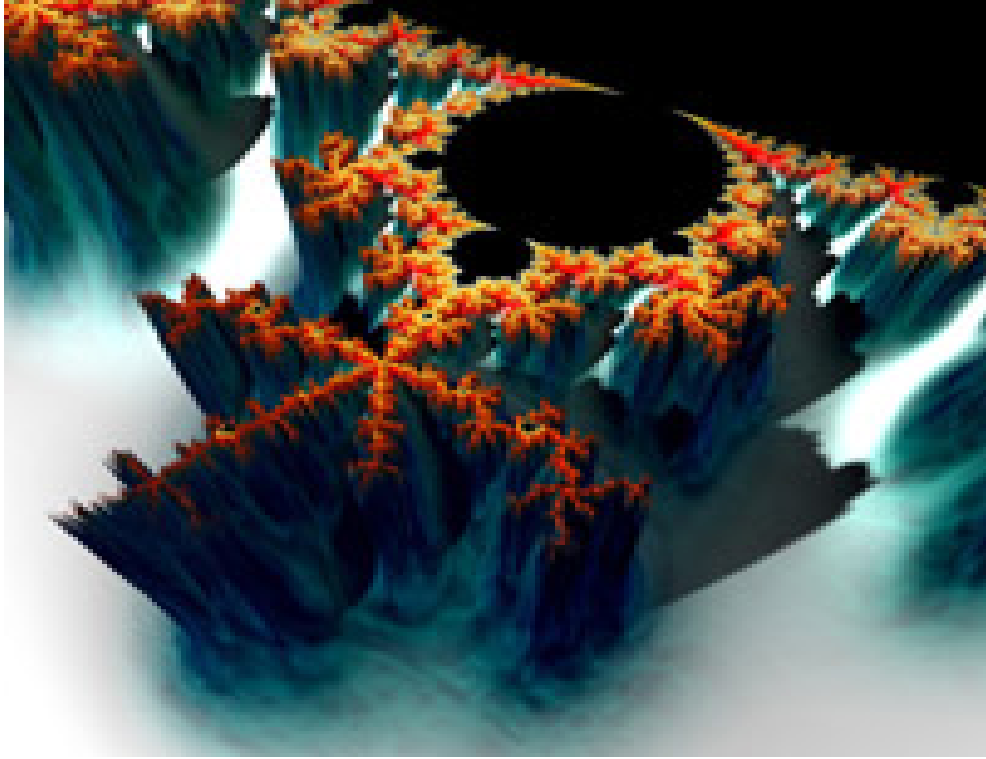


Figure 8: Virtual reality