

How to draw fractals using an IFS

Important definitions;

IFS; $W = w_1 \cap w_2 \cap \dots \cap w_k$

Affine transformation $w = A + v$

Contractions (on \mathbf{R}^2 and on space of images)

Contraction Mapping Principle

iteration (composition)

fixed point

Important ideas;

Iterate IFS beginning with any image

The IFS has a fixed point (the fractal)

Further ideas;

Analogy with the MMCM

Self-similarity of fractal is defined through the IFS (blueprint)

Advantages and disadvantages (eg., 'easy' to create certain fractals, can iteration produce any fractal??)