

Artist's Statement

My work is a personal visualization of patterns and structures emerging from mathematical processes that are simulated by computer programs I design. Each work is an attempt to make a visual connection with the enormous complexity and unity that lies within the rich mathematical objects that inspire my images. The computer code I have shaped over the last twenty years contains sections that define the composition, colour and texture of each piece. Much of my work is based on the extraordinary and often chaotic behaviour that emerges from feedback loops of the form $x_{n+1} = f(x_n)$ where f is a function that I carefully constructed for its mathematical and artistic interest. Since artist's brains are also constructed from feedback loops, I see a parallel between my own work generated by a computer and traditional art generated by networks of neurons put in place by evolutionary imperatives encoded in our DNA. I wonder whose art is more intentional, the artist who explicitly creates the feedback loop or the artist who is guided by the feedback loops in their own brain?

Bill Ralph