Abstract

Fractal is a new form of mathematics and art perhaps this is the cause why most people recognize fractals only as a beautiful pictures useful as backgrounds on the computer screen or original postcard patterns. Our goal is to discuss fractals, which are (roughly speaking) sets that possess a self-similarity on every scale: in other words, a set that appears to contain copies of itself when margined. A priori, it may seem that fractals have nothing to do with dynamical systems, but as we will discuss, the stable sets of certain dynamical systems are fractals, and many examples of fractals arise as the attracting sets of iterated function systems in higher-dimensional spaces.