

1116-37-301

Robert L. Devaney* (bob@bu.edu), Mathematics Dept., 111 Cummington Mall, Boston University, Boston, MA 02215. *Mandelpinski Structures in the Parameter Planes of Rational Maps.*

In this talk we shall describe three different types of Mandelpinski structures that arise in the parameter planes of singularly perturbed complex maps, namely Mandelpinski necklaces, spokes, and mazes. Each of these objects consists of a collection of infinitely many different curves arranged in a particular manner along which are located a large number of (usually infinitely many) Mandelbrot sets and Sierpinski holes in alternating fashion. Here a Sierpinski hole is a disk in the parameter plane from which any parameter has a corresponding Julia set that is a Sierpinski curve, i.e., is homeomorphic to the Sierpinski carpet fractal. (Received August 24, 2015)