

The General M Set and Julia Sets Generated by Complex Iteration

$$Z_{N+1} = Z_N^{-2} + C$$

Zhe Xu, X.G. Deng, X.D. Liu, W.Y. Zhu,
School of Information and Engineering, Northeastern University
Shenyang 110006 China

Email: xuzhe@263.net dengxuegong@sohu.com Tel.: 13066622225/024-23842017 & 13998158421

ABSTRACT

In this paper, the General Mandelbrot set and Julia sets of complex iteration $Z_{n+1} = Z_n^{-2} + C$ were studied. The number and classification of periodic buds were given and the growth rules of Julia set in a bud were described. According to the classification of the buds, the similarity of the Julia sets that are in the same bud is described, and the difference of the Julia sets that the construction parameter is in different buds are described, attached with many computer images.