Abstract

We study iterated function systems of contractions of C which depend holomorphically on a complex parameter λ. We prove that the Hausdorff dimension of the limit set $J(\lambda)$ is a continuous, subharmonic function of λ when the systems consist of similarities and satisfy the OSC. We also give conditions under which $J(\lambda)$ and $A(\lambda) = \overline{J(\lambda)}$ describe a holomorphic motion, and construct an example that shows that this is not the case in general. We finally show that $A(\lambda)$ is best described as an analytic multifunction of λ, a notion that generalizes that of holomorphic motion.