Laminations from the Cubioid

Thurston originally developed invariant laminations as a combinatorial model for Julia sets of quadratic polynomials and used them to construct a combinatorial model for the Mandelbrot set, the parameter space of quadratic polynomials. The *Principle Hyperbolic Domain* of degree d, $\mathrm{PHD_d}$, is the set of degree d polynomials of degree d with a simple closed curve Julia set. $\mathrm{Bd(PHD_2)}$, the *main cardioid*, is of fundamental importance to the structure of the Mandelbrot set and is homeomorphic to its combinatorial counterpart. In this talk we review the connection between laminations and Julia sets and describe the laminations that comprise $\mathrm{Bd(PHD_3)}$, the *main cubioid*.