

Holomorphic correspondences and parabolic-like maps

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The Sullivan's dictionary relates rational maps and finitely generated Kleinian groups. Correspondences are objects that generalize both rational maps and finitely generated Kleinian groups. In the '90, S. Bullett and C. Penrose constructed topological correspondences which are matings between the quadratic family $Q_c(z) = z^2 + c$ and the modular group $PSL(2, \mathbb{Z})$. They proved that such matings lie in a 1-parameter family of holomorphic correspondences, and they conjectured that the connectedness locus M_{corr} for this family is homeomorphic to the Mandelbrot set. With S. Bullett we are working on solving this conjecture, and we got partial results toward it.