A Gallery of Iterated Correspondences

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Abstract

Algebraic correspondences on the Riemann sphere generalise both Kleinian groups and rational maps. We classify quadratic correspondences satisfying certain "diagram conditions" and derive canonical forms for them. We exhibit examples for which the regular set and limit set are both nontrivial, and show that such examples can simultaneously exhibit Kleinian-group-like and rational-map-like behaviour. We also state some general theorems and conjectures.