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Daniel Cuzzocreo* (dcuzzocreo@smith.edu). *Parameter Space Structures for Rational Maps.*

For parametrized families of dynamical systems, a major goal is to understand the structure of the bifurcation locus in the parameter space. The family $F_\lambda = z^n + \lambda/z^d$ gives a 1-parameter, $n + d$ degree family of rational maps of the Riemann sphere, which arise as singular perturbations of the polynomial z^n . In this talk we describe some new results which explain some of the intricate fractal structure that arises in these parameter spaces, including a system of necklaces and subnecklaces converging down to the McMullen domain, passing alternately through superstable and escape-time Sierpiński parameters. (Received September 16, 2014)