

1046-37-428

Robert W O'Connell* (rwoconne@indiana.edu), Rawles Hall, 831 East 3rd St, Bloomington,
IN 47405. *Pinching Deformations of Rational Maps.*

Let f be a rational map defined on the Riemann sphere. Then f defines a dynamical system whose chaotic locus is called the Julia set. A pinching deformation, $f_t, t > 0$, is a one-parameter family of deformations of f . It is a way to create a parabolic cycle by forcing an attracting cycle and a repelling cycle to collide. The main result shows that for certain pinching deformations, if $f_t \rightarrow g$ uniformly, then the Julia set of f_t converges in the Hausdorff topology to the Julia set of g . (Received September 02, 2008)