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**Eric Bedford\*** ([ebedford@math.stonybrook.edu](mailto:ebedford@math.stonybrook.edu)), Department of Mathematics, Stony Brook University, Stony Brook, NY 11794. *No smooth Julia sets for Henon maps.*

We will discuss the polynomial automorphisms of  $\mathbb{C}^2$  of positive entropy. These are the finite compositions of complex Hénon maps. We will present a result, obtained jointly with Kyounghee Kim, that the forward and backward Julia sets for these maps are never smooth. Thus this family of automorphisms contains no mappings which are analogous to the 1-dimensional case, where there are the special maps  $z \mapsto z^d$  and the Tchebyshev maps. (Received January 25, 2016)