

1106-32-2255

Paul Reschke* (preschke@umich.edu), Department of Mathematics, University of Michigan, 530 Church St, 2076 East Hall, Ann Arbor, MI 48109. *Embedding Complex Surface Automorphisms Into Birational Self-Maps of Rational Varieties.*

It is a well-known result in algebraic geometry (due essentially to Chow) that an endomorphism of a complex projective variety can always be realized as the restriction of some rational self-map of a projective space. Fakhruddin explained how to construct a rational self-map of this sort in the special case where the endomorphism is polarized—and showed that the rational self-map is actually itself an endomorphism. I will explain how to use some of Fakhruddin’s ideas to construct rational self-maps of rational varieties which restrict to certain automorphisms of complex projective surfaces—and I will show that these rational self-maps are actually birational. I will then explain how the construction of these rational self-maps can be useful in understanding certain families of K3 surface automorphisms. (Received September 16, 2014)