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**Benjamin Hutz\*** (bhutz@gc.cuny.edu). *Morphisms of projective space with automorphisms*. Preliminary report.

We consider the moduli space of dynamical systems on projective space up to conjugation by the projective general linear group. We address the problem of constructing all maps with a specified automorphism group using invariant theory. As time allows, we will discuss a particular family of maps on the projective line related to automorphisms, Newton iteration, and Lattès maps. (Received March 05, 2011)