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Title: Identity-preserving and inverse-preserving polynomial maps from $\mathbb{C}$ to $\mathrm{SL}(n, \mathbb{C})$
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A map $f : \mathbb{C} \to \mathrm{SL}(n, \mathbb{C})$ is *polynomial* if each entry of $f(z)$ is a polynomial function of z, *identity-preserving* if $f(0)$ is the identity matrix, and *inverse-preserving* if $f(-z) = f(z)^{-1}$ for all z. Obviously, if f is a group homomorphism then it is both identity-preserving and inverse-preserving, but the converse is far from true: the polynomial group homomorphisms from $\mathbb{C}$ to $\mathrm{SL}(n, \mathbb{C})$ form a finite-dimensional algebraic variety called the nilpotent cone, whereas the identity-preserving and inverse-preserving polynomial maps form an infinite-dimensional variety. I will explain a natural stratification of this infinite-dimensional variety into connected finite-dimensional varieties, which are isomorphic to Nakajima quiver varieties of type D.