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# Quiver varieties of type D

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Nakajima quiver varieties are closely analogous to the resolutions of Slodowy slices in nilpotent cones of simple Lie algebras. In type A this is more than an analogy: as conjectured by Nakajima and proved by Maffei, each quiver variety of type A is isomorphic to the resolution of a Slodowy slice in a nilpotent orbit closure of type A.

One cannot expect such isomorphisms in general for other types. However, the observations of Reeder about zero weight spaces of small representations of simply-laced simple Lie algebras suggest that the particular quiver varieties corresponding to those weight spaces are related to Slodowy slices.

In joint work with A. Licata (Australian National University) we prove some of the expected relationships in type D. Our method is to realize the quiver varieties of type D as the fixed-point sets of diagram involutions of quiver varieties of type A. In the small case, we can show that the diagram involution corresponds under Maffei's isomorphism to a classical involution of the Slodowy slice.