Quiver Representations and the Irreducible Components in the Complement of the Richardson Orbit
(joint with Karin Baur)

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Abstract:

We consider a parabolic subgroup in the General Linear Group, such a group is the stabilizer of a flag in a vector space. The parabolic group acts on the Lie algebra of its unipotent radical, consisting of all endomorphisms mapping a vector space in the flag to the next smaller one. This action admits a dense orbit by a classical result of Richardson. We determine the irreducible components of the complement.

The main idea behind the solution relates the action to similar questions about quiver representations. In particular, representations of the directed quiver of type A, the corresponding preprojective algebra and representations of the double quiver.