

LIE ALGEBRAS, SIMILAR MATRICES AND BILINEAR FORMS

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In this talk I am going to apply a stratification of moduli spaces of complex Lie algebras to analyzing the moduli spaces of $n \times n$ matrices under scalar similarity and bilinear forms under the cogredient action. For similar matrices, I will give a complete description of a stratification of the space by some very simple projective orbifolds of the form \mathbf{P}^n/G , where G is a subgroup of the symmetric group σ_{n+1} acting on \mathbf{P} by permuting the projective coordinates.

The work is joint with Michael Penkava and will appear in *Journal of Algebra* (2018).

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