

Title: Generic Representation Theory of Quivers with Relations

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Abstract: The irreducible components of varieties parametrizing classes of finite dimensional representations of a finite dimensional algebra  $A$  are explored, in terms of both their geometry and the modules they encode. In particular, we establish the existence (and uniqueness, in a sense to be specified) of modules which display *\*all\** categorical generic properties of the modules in a given irreducible component  $V$  of one of these varieties, and follow with an investigation of their properties; here "categorical" means "stable under self-equivalences of the category of  $A$ -modules", and "generic" means "satisfied by all modules corresponding to the points in a dense open subset of  $V$ ". The sharpest specific results on the various fronts are obtained for truncated path algebras, that is, path algebras of quivers modulo ideals generated by all paths of a fixed length. In this situation, the generic modules and their syzygies can be constructed explicitly from the underlying quiver and the Loewy length of the algebra.