RAGNAR-OLAF BUCHWEITZ, University of Toronto at Scarborough, UTSC, 1265 Military Trail, Toronto, ON, M1C 1A4 On the Endomorphismring of the Syzygies in the Tautological Koszul Complex

Recent work on noncommutative desingularisations of determinantal varieties led us to take a closer look at the object in the title. While its linear properties, such as local cohomology and projective resolution, are well within reach of a first course in homological algebra—and provide interesting examples—the multiplicative properties are more intriguing.

Based on results by T. Bridgeland, we know that the n-th Veronese subalgebra, if n is the number of variables, is Koszul, Calabi–Yau, of finite global dimension, and provides an algebraic model of the anti-canonical bundle of the underlying projective space, realising that bundle as a moduli space of representations of that algebra.

We will indicate how these results relate to the theory of quiver representations and helices. Joint work with Thuy Pham.