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Representations of Gan–Ginzburg algebras and quiver-related differential operators

Gan–Ginzburg algebras are one-parameter deformations of the wreath product of a symmetric group with a deformed preprojective algebra for a quiver Q . When Q is extended Dynkin, these algebras are related to the symplectic reflection algebras of Etingof and Ginzburg, and when Q is star-shaped, but not finite Dynkin, they contain a subalgebra isomorphic to a Generalized Double Affine Hecke Algebra (GDAHA). In this talk, we will explain how to construct representations of Gan–Ginzburg algebras starting from modules over the algebra of differential operators on a space of representations of the quiver Q . Time allowing, we will present a Lie theoretic construction of representations for GDAHAs, and show how some of these representations can be obtained by restriction from the representations of Gan–Ginzburg algebras we introduced.