

COHERENT CATEGORIFICATION OF QUANTUM LOOP**SL₂**

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Abstract: We explain an equivalence of categories between a module category of quiver Hecke algebras associated with the Kronecker quiver and a category of equivariant perverse coherent sheaves on the nilpotent cone of type A. This provides a link between two different monoidal categorifications of the open quantum unipotent cell of affine type A_1 , one given by Kang-Kashiwara-Kim-Oh-Park in terms of quiver Hecke algebras, the other given by Cautis-Williams in terms of equivariant perverse coherent sheaves on affine Grassmannians. This is a joint work with Michela Varagnolo and Eric Vasserot.