

2-REPRESENTATIONS OF SOERGEL BIMODULES

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The aim of this talk is to describe recent progress in the study of 2-representations of the 2-category of Soergel bimodules over the coinvariant algebra of a finite Coxeter group. For finite Weyl groups this 2-category is biequivalent to the 2-category of projective functors on the principal block of the BGG category \mathcal{O} associated with the corresponding finite dimensional simple complex Lie algebra. In many cases, it turns out that simple transitive 2-representations of the 2-category of Soergel bimodules have Lie-theoretic interpretation, which we will try to explain. Finally, we will also explain an ADE-type classification of certain integral matrices which popped up in the study of Soergel bimodules for general dihedral groups.

Joint work with Tobias Kildetoft (Uppsala University), Marco Mackaay (University of Algarve) and Jakob Zimmermann (Uppsala University).