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**NOAH FRIESEN**, University of Saskatchewan  
*Braid groups and Baxter polynomials*

It is a classical result in representation theory that the braid group of a simple Lie algebra  $\mathfrak{g}$  acts on any integrable representation of  $\mathfrak{g}$  via products of exponentials of Chevalley generators of  $\mathfrak{g}$ . In this talk, we show that modifying this action induces an action on the commutative subalgebra  $Y_{\hbar}^0(\mathfrak{g})$  of the Yangian. Dualizing this modified action gives us a new factorization of the Baxter polynomials of any irreducible representation of the Yangian, whose zeros encode information about the tensor products of such representations.