

CATEGORIFICATION OF QUANTUM SYMMETRIC PAIRS

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Certain coideal subalgebras of the quantized enveloping algebra of sl_n arise naturally in Schur-Weyl duality with Hecke algebras of type B. They provide examples of quantum symmetric pairs and admit a theory of canonical bases. In this talk, we will explain how to categorify these coideal algebras using a 2-category analogue to Khovanov-Lauda-Rouquier's categorification of $U_q(sl_n)$, and some applications of this 2-category. This is a joint work with Huanchen Bao, Weiqiang Wang and Ben Webster.