Hall algebras and i-quantum groups

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A quantum symmetric pair consists of a quantum group and a coideal subalgebra (called an i-quantum group). Quantum groups can be viewed as an example of i-quantum groups associated to symmetric pairs of diagonal type. In recent years various fundamental constructions for quantum groups (such as R-matrices and canonical bases) have been generalized to i-quantum groups. In this talk, we present a realization of i-quantum groups via semi-derived Ringel-Hall algebras of i-quivers; this approach leads to braid group actions on i-quantum groups. This is joint work with Ming LU (Sichuan, China).