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Canonical bases in quantum Schubert cells

Abstract:

The goal of my talk (based on a recent joint paper with Jacob Greenstein) is to provide an elementary construction of the canonical basis \( B(w) \) in each quantum Schubert cell \( U_q(w) \) and to establish its invariance under Lusztig's symmetries. In particular, I will explain how to directly construct the upper global basis \( B^{\text{up}} \), will show that \( B(w) \) is contained in \( B^{\text{up}} \), and that a large part of the latter is preserved by the (modified) Lusztig's symmetries.