Top degree components of Grothendieck and Lascoux polynomials

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Abstract

The Schubert polynomials and key polynomials form two important bases for the polynomial ring. Schubert and key polynomials are the "bottom layers" of Grothendieck and Lascoux polynomials, two inhomogeneous polynomials. In this talk, we look at their "top layers". We develop a diagrammatic way to compute the degrees and the leading monomials of these top layers. Finally, we describe the Hilbert series of the space spanned by these top layers, involving a classical q-analogue of the Bell numbers.