

Discrete affairs with Macdonald and Gromov-Witten

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After discussing the nature of problems in Schubert calculus, we will see how our lasting relationship with Macdonald symmetric functions has led us to find that Lascoux-Schützenberger charge on tableaux can be used as a tool in quantum, affine and equivariant Schubert calculus. We will also give a new formula for the monomial expansion of Macdonald polynomials using the charge statistic.