Littlewood Richardson Coefficients.

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Thursday, December 11, 2003

102 Bradley Hall, 4:00 pm
(Tea 3:30 pm Math Lounge)

Abstract

In the study of representations of the symmetric group, symmetric functions play a central role. There is in fact a wonderfull correspondance between constructions pertaining to these representations, and computations involving symmetric functions. In this correspondance, Schur functions represent irreducible representations. Product of symmetric functions also correspond to tensor product of representations. We will rapidly describe all these notions and show how this helps in the decomposition into irreducible of the tensor products. This leads to the problem of expanding the product of two Schur functions as a linear combination of Schur functions, with positive integer coefficients that are called Littlewood-Richardson coefficients. We will show many nice formulas and open conjectures regarding these coefficients.

This talk should be accessible to graduate students.