A dual approach to structure constants for K-theory of Grassmannians

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Abstract

The problem of computing products of Schubert classes in the cohomology ring can be formulated as the
problem of expanding skew Schur polynomial into the basis of ordinary Schur polynomials. We reformulate the
problem of computing the structure constants of the Grothendieck ring of a Grassmannian variety with respect to its
basis of Schubert structure sheaves in a similar way; we address the problem of expanding the generating functions for
skew reverse-plane partitions into the basis of polynomials which are Hall-dual to stable Grothendieck polynomials.
From this point of view, we produce a chain of bijections leading to Buch's K-theoretic Littlewood-Richardson rule.

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