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Wreath products by the symmetric groups and product posets of Young's lattices. (English)

Zbl 0707.05062

J. Comb. Theory, Ser. A 55, No. 1, 14-32 (1990).

The Young lattice is the poset of all partitions of the set of positive integers, namely almost everywhere null never increasing sequences of non-negative integers with positive sum. Studying the connections between wreath products $G \wr S_n$ of a finite group G with a symmetric groups S_n and powers of the Young lattice, the author is able to give a complete set of mutually orthogonal eigenvectors for the linear mapping $Ind_{n-1}^n \circ Res_{n-1}^n$ of the vector space of class functions of $G \wr S_n$, where Ind_{n-1}^n is the induction mapping from (the vector space of class functions of) $G \wr S_{n-1}$ to $G \wr S_n$ and Res_{n-1}^n is the restriction mapping from (the vector space of class functions of) $G \wr S_n$ to $G \wr S_{n-1}$.

Reviewer: [A.Pasini](#)

MSC:

05E25 Group actions on posets, etc. (MSC2000)

20B25 Finite automorphism groups of algebraic, geometric, or combinatorial structures

06A07 Combinatorics of partially ordered sets

20C30 Representations of finite symmetric groups

Cited in **16** Documents

Keywords:

[partitions](#); [symmetric groups](#); [wreath products](#); [Young lattice](#)

Full Text: [DOI](#)

References:

- [1] Kerber, A, Representations of permutation groups I, () · [Zbl 0232.20014](#)
- [2] Knuth, D.E, ()
- [3] Macdonald, I.G, Symmetric functions and Hall polynomials, (1979), Oxford Univ. Press Oxford · [Zbl 0487.20007](#)
- [4] Macdonald, I.G, Polynomial functors and wreath products, J. pure appl. algebra, 18, 173-204, (1980) · [Zbl 0455.18002](#)
- [5] Stanley, R.P, Some aspects of groups acting on finite posets, J. combin. theory ser. A, 32, 132-161, (1982) · [Zbl 0496.06001](#)
- [6] Stanley, R.P, Differential posets, J. amer. math. soc., 1, 919-961, (1988) · [Zbl 0658.05006](#)

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