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Kazhdan-Lusztig polynomials of thagomizer matroids. (English) Zbl 1369.05029
Electron. J. Comb. 24, No. 3, Research Paper P3.12, 10 p. (2017).

Summary: We introduce thagomizer matroids and compute the Kazhdan-Lusztig polynomial of a rank $n + 1$ thagomizer matroid by showing that the coefficient of t^k is equal to the number of Dyck paths of semilength n with k long ascents. We also give a conjecture for the S_n -equivariant Kazhdan-Lusztig polynomial of a thagomizer matroid.

MSC:

- [05B35](#) Combinatorial aspects of matroids and geometric lattices
- [05A15](#) Exact enumeration problems, generating functions
- [20C30](#) Representations of finite symmetric groups
- [52B40](#) Matroids in convex geometry (realizations in the context of convex polytopes, convexity in combinatorial structures, etc.)

Cited in 7 Documents

Keywords:

matroid theory; Kazhdan-Lusztig polynomials; generating functions; Schur functions

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