

COUNTING SLIM SEMIMODULAR LATTICES

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We call a lattice slim, if the set of its join-irreducible elements are the union of two chains. A lattice is upper semimodular, if for every a, b, c elements for which $a \prec b$, $b \vee c$ covers or equals $a \vee c$. L is a slim semimodular lattice if it is slim and upper semimodular. Slim semimodular lattices are planar. Using the characterizations given by G. Czedli and E. T. Schmidt, our goal is to count them according to size and height, including some special subclasses of them.

- [1] G. CZEDLI, L. OZSVART, B. UDVARI, How many ways can two composition series intersect?, *Discrete Mathematics* **312** (2012), 3523–3536.
- [2] G. CZEDLI, T. DEKANY, L. OZSVART, N. SZAKACS, B. UDVARI, On the number of slim, semimodular lattices (submitted).