

Katriňák, T.; Guričan, J.

Finite pseudocomplemented lattices: The spectra and the Glivenko congruence. (English)

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Given a pseudocomplemented semilattice P and $a \in P$, the principal ideal $[a]$ is known to be a pseudocomplemented semilattice. The corresponding Boolean lattices of closed elements will be denoted by $S(P)$ and $S(a)$, respectively.

Let L be a finite pseudocomplemented lattice L , where $S(L)$ has exactly n atoms, and let B_i be the finite Boolean lattice with i atoms. The Boolean spectrum of L is the sequence $\mathbf{s} = (s_0, \dots, s_n)$, where

$$s_i = |\{a \in L : S(a) \cong B_i\}|.$$

Recently, *G. Grätzer, D. S. Gunderson* and *R. W. Quackenbush* have characterized the spectra of finite pseudocomplemented semilattices [“The spectrum of a finite pseudocomplemented lattice”, Algebra Univers. 61, No. 3–4, 407–411 (2009; Zbl 1209.06004)].

In the paper under review a tight connection between the spectra and the Glivenko congruence of finite pseudocomplemented semilattices is discussed. Also the spectra of finite Stone lattices are characterized.

Reviewer: [Radomír Halaš \(Prostejov\)](#)

MSC:

06D15 Pseudocomplemented lattices
06A12 Semilattices
06E05 Structure theory of Boolean algebras

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