
Zbl 1143.06004**Picado, Jorge; Pultr, Aleš; Tozzi, Anna****Ideals in Heyting semilattices and open homomorphisms.** (English)

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A Heyting semilattice is a (meet-)semilattice with (Heyting) operation \rightarrow satisfying $a \wedge b \leq c$ iff $a \leq b \rightarrow c$. The authors study ideals and complete ideals in these objects, show that some standard facts about subfitness (an important concept of topology and logic) hold in this general context, and discuss the question of openness confronted with completeness. A Heyting semilattice H is subfit if we have the implication $a \not\leq b \Rightarrow$ there is $c \in H$, $\sup\{a, c\} = 1 \neq \sup\{b, c\}$. A Heyting semilattice H is c-subfit if for a complete ideal $S \subseteq H$, $S \setminus \{1\}$ is cofinal in $H \setminus \{1\}$ only if $S = H$. The authors prove that a Heyting semilattice is c-subfit iff every complete ideal in H is open (that is, the condition of c-subfitness is necessary and sufficient for openness and completeness to coincide; for a large class of spatial frames, c-subfit \equiv subfit).

*Florentina Chirteș (Craiova)**Keywords* : Heyting semilattices; ideal; subfitness; open and complete ideals and homomorphisms*Classification* :

*06A12 Semilattices

06D20 Heyting algebras

06D22 Frames etc.