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Pataki, Gergely (H-LAJO); **Száz, Árpád** (H-LAJO)
Characterizations of nonexpansive multipliers on partially ordered sets. (English summary)
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A function f from a subset D of a poset A into A is called a nonexpansive multiplier if $f(d) \le d$ and $f(d) \wedge e = f(e) \wedge d$ for all d, e in D. In this paper the authors give some characterizations of these functions and establish connections between them and interior operators. These results extend results of G. Szasz, J. Szendrei, M. Kolibar, W. H. Cornish, and A. Szaz. One characterization is: if f is a function from a semilattice D contained in a poset A into A, then the following are equivalent: (1) f is a nonexpansive multiplier; (2) $f(d) = f(e) \wedge d$ for all d, e in D with $d \le e$; (3) $f(d \wedge e) = f(d) \wedge e$ for all d, e in D. A connection to interior operators is: if f is a function from a semilattice D in a poset A into A such that $f(e) \wedge d \in f(D) \cap D$ for all d, e in D with $d \le e$, then the following are equivalent: (1) f is a nonexpansive multiplier; (2) f is a multiplicative operator; (3) f is a quasi-interior operator.

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