Horváth, Eszter K.; **Pöschel, Reinhard**; **Reichard, Sven**

Invariance groups of functions and related Galois connections. (English) Zbl 07352566

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Summary: Invariance groups of sets of Boolean functions can be characterized as Galois closures of a suitable Galois connection. We consider such groups in a much more general context using group actions of an abstract group and arbitrary functions instead of Boolean ones. We characterize the Galois closures for both sides of the corresponding Galois connection and apply the results to known group actions.

MSC:

20B25 Finite automorphism groups of algebraic, geometric, or combinatorial structures
20B35 Subgroups of symmetric groups
06A15 Galois correspondences, closure operators (in relation to ordered sets)
05E18 Group actions on combinatorial structures

Keywords:

invariance group; group action; Galois connection; Boolean function; permutation group

Full Text: DOI

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