

Finite basis problems for quasivarieties, and the weak extension property

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Abstract. We have announced that every finitely generated quasivariety of finite signature whose relative congruence lattices are meet semi-distributive is finitely axiomatizable. The weak extension property (WEP) for quasivarieties plays a role in the proof of this result. A quasivariety \mathcal{K} is said to have the weak extension property if for every algebra $\mathbf{A} \in \mathcal{K}$ and for every pair of congruences α, β of \mathbf{A} such that α and β intersect to 0_A (the identity relation), the least \mathcal{K} -congruences of \mathbf{A} including α (respectively β) also intersect to 0_A . W. Dziobiak has conjectured that every finitely generated quasivariety of finite signature with the weak extension property is finitely axiomatizable. (This is a far-reaching extension of Park's conjecture for varieties.) In this talk, I will describe some results about WEP that were proved recently by our team of W. Dziobiak, M. Maroti, A. Nurakuno, R. Willard and myself.