

# Ideals and slices over the algebra of constants

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Let  $\mathcal{V}$  be a variety and  $c$  a nullary term. I will discuss a simple universal-algebraic construction that extracts from  $\mathcal{V}$  the structures that behave like  $c$ -ideals. The construction is based on the terms  $\theta$  such that  $\theta(c, \dots, c) = c$ , and on the corresponding quasivariety  $\mathcal{V}_c$  of subreducts of algebras in  $\mathcal{V}$ .

This point of view gives familiar examples: rngs from unital rings, generalized Boolean algebras from Boolean algebras, and Wajsberg hoops from MV-algebras. I will explain how  $\mathcal{V}_c$  can be compared with the slice category  $\mathcal{V}/I$ , the category of homomorphisms from algebras in  $\mathcal{V}$  to the algebra  $I$  of nullary terms. This comparison is always a coreflection of  $\mathcal{V}_c$  into  $\mathcal{V}/I$ , and I will characterize when it is an equivalence via a condition similar to the condition defining classically ideal determined varieties.

*This is joint work in progress with Giuseppe Metere and Serafina Lapenta.*