

- BRETT MCLEAN, *Complete representation by partial functions for signatures containing antidomain restriction*.

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In [2], Jackson and Stokes investigate the axiomatisability of classes of algebras that are representable as (i.e. isomorphic to) an algebra of partial functions. Using a uniform method of representation, they give, for around 30 different signatures containing the *domain restriction* operation, either a finite equational or finite quasi-equational axiomatisation of the class of representable algebras. Only a handful of these classes had previously been axiomatised.

We show that a similar uniform method of representation can be used to characterise many of the corresponding subclasses of completely representable algebras. A complete representation is one that turns any existing infima/suprema into intersections/unions. Specifically, we do this for signatures containing the operation called *minus* in [2] and which we call *antidomain restriction*; thus for about half of the signatures treated in [2]. Together with the results of [2], this gives us finite first-order axiomatisations of these classes of completely representable algebras. Only a couple of complete representation classes had previously been axiomatised (for representation as partial functions) [3, 1].

[1] CÉLIA BORLIDO AND BRETT MCLEAN, *Difference–restriction algebras of partial functions: axiomatisations and representations*, ***Algebra Universalis***, vol. 83 (2022), no. 3, 27 pp.

[2] MARCEL JACKSON AND TIM STOKES, *Restriction in Program Algebra*, ***Logic Journal of the IGPL***, (2022), 35 pp.

[3] BRETT MCLEAN, *Complete representation by partial functions for composition, intersection and antidomain*, ***Journal of Logic and Computation***, vol. 27 (2017), no. 4, pp. 1143–1156.