

- ▶ JUAN RICARDO PRADA, JOSÉ LUIS CASTIGLIONI, *SubSugihara Chains*.  
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An *odd Sugihara monoid* (*OSM*) is an involutive, distributive, and idempotent residuated lattice  $(S, \wedge, \vee, \cdot, \rightarrow, \neg, t)$  such that  $\neg t = t$ . As in any involutive residuated lattice, the operation  $\cdot$  can be defined in terms of  $\rightarrow$  and  $\neg$ . It is well known (see [2] or [3]) that the variety *OSM* is generated by its chains. The class of bounded *OSMs* provides an algebraic semantics for *IUML*, which is an extension of the relevant logic  $RM^t$ , *R-mingle*, formulated with Ackermann's constant  $t$  (see, for example [4]).

In [3], a categorical equivalence between the variety of Gödel algebras and that of bounded Sugihara monoids is established,  $S : G \rightleftharpoons bOSM : C$ . At the level of objects, the functor  $S$  is given by a twist-structure construction over a Gödel algebra  $A$ .

The aim of the present communication is to introduce the class of algebras obtained by applying the previously defined construction  $S$  to the elements of the class of subGödel algebras. Clearly, this class properly contains the class of bounded *OSMs*. However, by virtue of having more elements, we expect it to yield the algebraic semantics of a logic with better relevance properties than *IUML*, while still remaining relatively simple to study.

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[2] FUSSNER, W. & GALATOS, G., *Categories of models of R-mingle*, **Annals of Pure and Applied Logic**, vol. 170(2019), no. 10, 1188–1242.

[3] GALATOS, G. & RAFTERY J. G., *A category equivalence for odd Sugihara monoids and its applications*, **Journal of Pure and Applied Algebra**, vol. 216 (2015), no. 10, 2177–2192 .

[4] METCALFE, G. & MONTAGNA F., *Substructural fuzzy logics*, **The Journal of Symbolic Logic**, vol.72 (2007), no.3, pp.834–864.