► YENNY CAROLINA MOLANO CASTAÑO, SERGIO CELANI, *Representation for distributive Hilbert algebras.*
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A Hilbert algebra $(A, \to, 1)$ induces a poset with a greatest element $(A, \leq, 1)$, where the order is defined by $a \leq b$ if and only if $a \to b = 1$. When $(A, \leq)$ is a bounded distributive lattice, the algebra $(A, \vee, \wedge, \to, 0, 1)$ is called a *distributive Hilbert algebra*. That is, an algebra $(A, \vee, \wedge, \to, 0, 1)$ whose reduct $(A, \to, 1)$ is a Hilbert algebra and whose reduct $(A, \vee, \wedge, 0, 1)$, induced by $\to$, is a bounded distributive lattice.

Although these algebras have the same language as Heyting algebras, they are not the same. In [2], it was shown that distributive Hilbert algebras form a variety and strictly include the class of Heyting algebras. This difference implies that, in distributive Hilbert algebras, the implicative filters of the reduct $(A, \to, 1)$ do not coincide with the lattice filters of the reduct $(A, \vee, \wedge, \to, 0, 1)$. Consequently, when searching for a representation through set algebras, the question arises as to which filters should be considered.

Based on ideas for the representation of Hilbert algebras with infimum given in [1], we provide a representation for distributive Hilbert algebras. In addition, we present a topological duality.

[1] Celani, S. A. & Esteban, M., *Spectral-like duality for distributive Hilbert algebras with infimum*, ***Algebra universalis***, 78(2), 193-213.

[2] Figallo, A. V., Ramón, G., & Saad, S., *A note on the distributive Hilbert algebras.*, ***Fifth Dr. Antonio AR Monteiro Congress on Mathematics*** (Bahía Blanca), vol., V Publisher, Universidad Nacional del Sur 1999, pp.139–152.