

On some categorical structures arising from implicative algebras

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Implicative algebras have been recently introduced by Miquel in order to provide a unifying notion of model, encompassing the most relevant and used ones, such as realizability (both classical and intuitionistic), and forcing. In this talk, we initially approach implicative algebras as a generalization of locales, and we extend several topological-like concepts to the realm of implicative algebras, accompanied by various concrete examples. Then, we shift our focus to viewing implicative algebras as a generalization of partial combinatory algebras. We abstract the notion of a category of assemblies, partition assemblies, and modest sets to arbitrary implicative algebras, and thoroughly investigate their categorical properties and interrelationships.