

## Walter Tholen

### *Categories of algebras and weak homomorphisms*

In 1961 Marczewski introduced a notion of “weak homomorphism” between algebras of potentially distinct signature, i.e., between objects of potentially quite distinct categories. In recent years, this notion has gained some traction in both universal algebra and coalgebra. Our talk will offer a framework to establish categories in which weak homomorphisms play the role of morphisms and (proper) homomorphisms appear as part of a double factorization structure that also induces a Quillen model structure.