

Restricted identity functors

Restricted identity functors are a generalization of identity relations on a set.

Let \mathcal{A} be a filter. Then there exists a unique functor (the *restricted identity functor* on \mathcal{A}) $\text{id}_{\mathcal{A}}^{\text{FCD}}$ such that:

$$\langle \text{id}_{\mathcal{A}}^{\text{FCD}} \rangle \mathcal{X} = \mathcal{X} \sqcap \mathcal{A};$$

$$\mathcal{X} [\text{id}_{\mathcal{A}}^{\text{FCD}}] \mathcal{Y} \Leftrightarrow \mathcal{X} \sqcap \mathcal{Y} \sqcap \mathcal{A} \neq 0^{\text{Base}(\mathcal{A})}.$$