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Kim, Ig Sung (KR-SNGI-DI)

A study on the quasi topos. (English summary)

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It is true that the category $FRel$ of fuzzy sets and relations does not form a topos. The principal objective in this paper is to show that $FRel$ forms a quasi topos. It is also shown that quasi power objects exist in $FRel$. Moreover, it is demonstrated that arbitrary small colimits exist in $FRel$, the bifunctor is cocontinuous, finite limits exist in $FRel$, epimorphisms are universally effective in $FRel$, all equivalence relations in $FRel$ are efficient, generators exist in $FRel$ and $FRel$ is complete, so that $FRel$ forms a vectoid.

Hirokazu Nishimura