

MONOIDAL KLEISLI CATEGORY STRUCTURE  
OF CLASSES OF INFORMATION  
TRANSFORMERS

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S u m m a r y

It is proposed to consider any uniform class of information transforming systems as morphisms of a certain category — a category of information transformers (ITs). Composition of ITs corresponds to their “consecutive application”. The paper introduces an axiomatics for a category of ITs as a monoidal category that contains a subcategory (of deterministic ITs) with finite products and satisfies a certain set of axioms. Besides, it shows that many IT-categories can be constructed as Kleisli categories.