An alternative notion of topological category. External logic on some topological categories

Carlos Javier Ruiz Salguero, Víctor Manuel Ardila de la Peña & José Reinaldo Montañez Puentes

In this talk an alternative definition of topological category is given; this definition is relationed with those given in [1] and [4].

Given a functor $F : \mathcal{C} \longrightarrow \mathcal{D}$ such that $\mathcal{D}$ has subobject classifier and $\mathcal{C}$ is topological according to F, it is possible to determinate a classifier for certain kinds of monomorphisms in $\mathcal{C}$. This contruction generates a logic on $\mathcal{C}$ which allows us to give adequate notions of topology and site in the sense of Lawvere and Tierney.

[1] Adamek J., Herrlich H., Strecker G. E., Abstract and concrete categories, *John Wiley & Sons.*, New York, Chichester, Brisbane, Toronto, Singapore, 1990.

[2] Goldblatt R., Topoi-the categorical analysis of logic, *Nort-Holland*, Amsterdam, 1984.

[3] Maclane and Moerdijk, Sheaves in Geometry and logic, *Springer Verlag*,New York, 1992.

[4] Preuss G., Theory of topological structures, D. Reidel Publishing Company, 1988.

Addresses
Carlos Javier Ruiz Salguero: A. A. 59243 Santafé de Bogotá, Colombia

Víctor Manuel Ardila de la Peña: A. A. 59243 Santafé de Bogotá, Colombia
E-mail: viardilalatinmail.com

José Reinaldo Montañez Puentes: Departamento de Matemáticas. Universidad Nacional de Colombia, A. A. 148 Santafé de Bogotá, Colombia
E-mail: montanezmatematicas.unal.edu.co