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Isotropy in the Category of Continuous G-sets

Recent work by Hofstra, Funk and Steinberg defined a new algebraic invariant of Grothendieck Topos called the isotropy group (2012). The isotropy group of a topos generalizes well known algebraic concepts like isotropy subgroups of groups acting on a set and vertex groups of groupoids. Additionally, there is a close connection to crossed modules. Joyal and Tierney showed that each Grothendieck topos is equivalent to a category of equivariant sheaves on some localic groupoid. For the case of a topological group G , we will present a topological group theoretic representation of the isotropy group in the category of continuous G -sets. The aim of this work is to build a bridge between ideas from topos theory on one hand and concepts in topological group theory on the other.