

Speaker: Justin Lynd, University of Louisiana at Lafayette

Title: Partial groups and higher Segal conditions

Abstract: Partial groups are group-like structures where instead of a binary product, one has a total product defined only on a subset of words of the underlying set. They were introduced by Chermak ultimately for the purpose of studying the p -local structure of a finite group, which itself can be distilled into a special type of partial group called a locality. Gonzalez showed that a partial group is really a special type of simplicial set. I will explain how to view the category of partial groups as reflective subcategory of presheaves on the category of nonempty finite sets and all functions, which for example leads to a concrete way for computing colimits of partial groups. In a second part of the talk, I will outline some preliminary work in progress studying higher associativity of partial groupoids in the context of the Dyckerhoff–Kapranov higher Segal conditions.