1067-03-910 **Jeremy Avigad*** (avigad@cmu.edu), Department of Philosophy, Baker Hall 135, Carnegie Mellon University, Pittsburgh, PA 15213. *Type inference in finite group theory.*

As in the theory of programming languages, "type inference" is used in formal verification to infer parts of the meaning of a syntactic expression, making use of the domains and structures that objects of the expression are known to inhabit. For example, it can mean inferring that a multiplication symbol refers to multiplication in a particular group, inferring that a particular subset construction denotes a group in and of itself, or inferring that another expression denotes a partial morphism between groups, with a particular domain. In this talk, I will describe some of the mechanisms for type inference that are used in the project, directed by Georges Gonthier, of obtaining a formal verification of the Feit-Thompson odd order theorem. (Received September 16, 2010)