

Mark van Atten (CNRS, Ecole Normale Supérieure)

Intuitionistic inductive definitions

Abstract: I reconstruct Brouwer's and Heyting's views on inductive definitions, and compare them with (a) the classical one, and (b) the operationalist one of Lorenzen and Heinzmann. This leads to the following conclusions about the intuitionistic view: (1) The clauses must be understood neither as propositions nor as permissions, but as instructions. Put differently, inductive definitions are governed by the grammar of the imperative. (2) An extremal clause then is redundant, and there is no concern over nonstandard iterations of the clauses. (3) The permissive aspect of the definition is no part of the meaning of the rules of which it consists, but lies in our freedom to undertake the construction of the defined object or not.