

The Predicate Extension of Gödel-Dummett Logic and the Neighbors

Hiroakira Ono

Japan Advanced Institute of Science and Technology, Japan

e-mail ono@jaist.ac.jp

This is an expository talk about the study of the predicate extension of Gödel-Dummett logic and also of intermediate predicate logics around it. Many works have been done in this field mainly in 80s. It seems that results and techniques in these works are closely related to problems on predicate extensions of fuzzy logic. Thus, hoping that it will be of some use in the study of fuzzy logic, I will present important results obtained so far in this area, and explain what difficulties we face. My talk will cover the following topics:

- Kripke (in)completeness and algebraic (in)completeness,
- Kripke completeness of minimum predicate extensions,
- extending Kripke semantics — Kripke bundle/sheaf semantics
- intermediate predicate logics characterized by particular totally ordered sets.