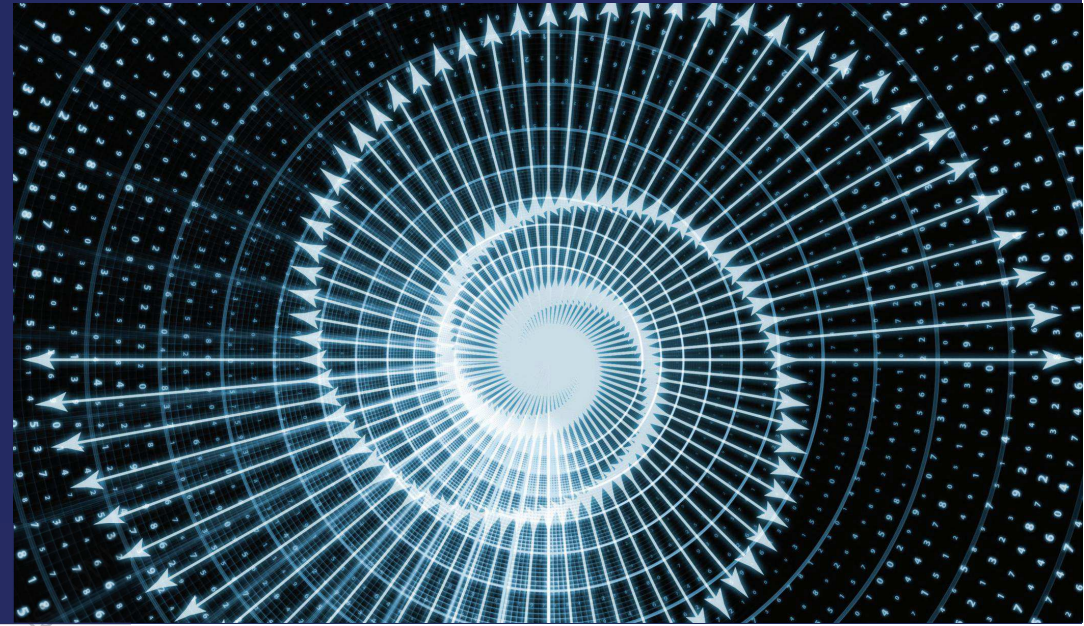In this book set theory INC# based on intuitionistic logic with restricted modus ponens rule is proposed. It proved that intuitionistic logic with restricted modus ponens rule can to safe Cantor naive set theory from a triviality Considering only pure sets, the naive set comprehension principle says, for anycondition, that there is a set containing all and only the sets satisfying this condition. Infirst-order logic, this can be formulated as the following schematic principle, where φmay be any formula in whichy does not occur freely: yxx y φ. 1.1 Russell's paradox shows that the instance obtained by letting φ be x x isinconsistent in classical logic. One response to the paradox is to restrict naive setcomprehension by ruling out this and other problematic instances: only for each of somespecial conditions is it claimed there is a set containing all and only the sets satisfyingthe condition.

Jaykov Foukzon

Set theory INC^# based on intuitionistic logic with restricted modus ponens rule
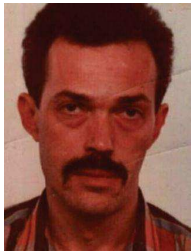
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