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Program and Abstracts

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There are a family of Liar-like and truth-teller-like sentences which the theory has to deal with. Some of these are provable, some of their negations are provable, but all are provably untrue. The theory carries with it an internal definition of ‘pathological’ sentences. This definition allows Liar-like sentences to be provably untrue, without falling into inconsistency. I provide a philosophical interpretation of this definition as sentences which are not ‘truth-apt’ and consider some other examples of pathological sentences, in particular those which quantify absolutely generally over all levels of the truth predicate. I propose that this is an interesting new axiomatic theory of truth with intriguing formal features that add new depth to contextualist approaches to the semantic paradoxes.

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BIRZHAN KALMURZAYEV

About Rogers semilattices in Ershov hierarchy

joint work with Sergey Ospichev

Study the cardinality of Rogers semilattices of families of sets in different hierarchies is one of the main questions in numbering theory. Here we concentrate our interest on Ershov hierarchy. In work are proven

Theorem. *For any nonzero ordinal notations $a, b \in O$ there exist $A \in \Sigma_a^{-1}$ and $B \in \Sigma_b^{-1}$ such that $|\mathcal{R}_c^{-1}(\{A, B\})| = 1$, where $\max\{a, b\} \leq_o c <_o \min\{a +_o b, b +_o a\}$.*

Theorem. *For any nonzero ordinal notations $a, b \in O$ and for all $A \in \Sigma_a^{-1}$ and $B \in \Sigma_b^{-1}$ Rogers semilattice $\mathcal{R}_c^{-1}(\{A, B\})$ is infinite, where $a +_o b <_o c$ or $b +_o a <_o c$.*

With these results we also can prove

Theorem. *There are ordinal notations $a, b \in O$ of ordinal ω^2 , such that Rogers semilattices \mathcal{R}_a^{-1} and \mathcal{R}_b^{-1} are nonisomorphic.*

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