

- SERGEY OSPICHEV, *Some properties of computable numberings in various classes in difference hierarchy.*

Mechanics and Mathematics Department, Novosibirsk State University, Pirogova st.,2, Novosibirsk, 630090, Russia.

E-mail: ospichev@gmail.com.

In this work are considered computable numberings [4] of families from various classes Σ_α^{-1} in difference hierarchy [2], where α is computable ordinal number.

It is shown that there are no computable numbering of the family of all sets from class Δ_α^{-1} , where α is computable ordinal number.

Definition. Numbering $\{\nu_n\}_{n \in \omega}$ is called ω -computable, if a set $\{ \langle m, n \rangle \mid m \in \nu_n \}$ is in class Δ_ω^{-1} .

In work is announced **Theorem.** There is a ω -computable minimal numberings of the family of all sets from class $\bigcup_{n \in \omega} \Sigma_n^{-1}$ in difference hierarchy.

In work [3] were proved that for all finite classes in difference hierarchy Σ_n^{-1} there is minimal Friedberg numbering of the family of all sets from Σ_n^{-1} .

[1] M.M. ARSLANOV, *Ershov's hierarchy.*, Kazan, KSU, 2007.(in Russian)

[2] YU.L. ERSHOV, *Theory of numberings, III*, Novosibirsk, NSU, 1972.

[3] S.S. GONCHAROV, S. LEMPP, D.R. SOLOMON., *Friedberg numberings of families of n -computability enumerable sets*, *Algebra and Logic*, vol. 41, no. 2, 2002, pp. 81–86.

[4] S.S. GONCHAROV, A. SORBI, *Generalized computable numerations and nontrivial Rogers semilattices*, *Algebra and Logic*, vol. 36, no. 6, 1997, pp. 359–369.