▸ NIKOLAY BAZHENOV, DINO ROSSEGGER, LUCA SAN MAURO AND MAXIM ZUBKOV, *On bi-embeddable categoricity of linear orders.*
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Given a linear order $\mathcal{L}$ and a linear order $\mathcal{M}$ bi-embeddable with $\mathcal{L}$, we say that $\mathcal{M}$ is a bi-embeddable copy of $\mathcal{L}$. We study the complexity of embeddings using the following definition analogous to computable categoricity.

DEFINITION 1. A countable linear order $\mathcal{L}$ is (relatively) $\Delta^0_n$-bi-embeddably categorical if for any bi-embeddable computable (for any bi-embeddable) copy $\mathcal{M}$, $\mathcal{M}$ and $\mathcal{L}$ are bi-embeddable by $\Delta^0_n$-embeddings ($\Delta^{\mathcal{L}\oplus\mathcal{M}}_n$-embeddings, correspondingly).

Recall, that a linear order is scattered if it has no a suborder of type $\eta$. It is easy to see, that the question about the level of bi-embeddable categoricity is nontrivial only for scattered linear orders. We obtain characterization of linear orders with finite levels of bi-embeddable categoricity.

THEOREM 2. *A scattered computable linear order of rank $n$ is relatively $\Delta^0_{2n}$-bi-embeddably categorical, and is not $\Delta^0_{2n-1}$-bi-embeddably categorical.*

The last author was supported by RFBR grant No. 18-31-00174.