The Journal of Symbolic Logic
Volume 91, Number 1, March 2026

RETRACTION - EXISTENCE OF MODELING LIMITS FOR SEQUENCES OF SPARSE STRUCTURES

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DOI: 10.1017/jsl.2018.32. Published online by Cambridge University Press 7 March 2019

The article [2] deals with the existence of totally Borel limits, i.e., modelings, for FO-converging sequences of graphs. It is shown there that for monotone classes of graphs (i.e., classes closed on subgraphs) this existence is equivalent to nowhere density. The crucial step in this result is formulated there as Theorem 3.2 and deals with existence modelings for FO_1 converging sequences. The proof in [2] is based on the Friedman's Q_m-logic, but there is a flaw in its proof. Shortly, the proof needs that the limit measure on the Stone space is absolutely continuous with respect to the measure produced by Friedman's construction. However, this is not true in general. Theorem 3.2 and its Corollary 3.3 may still be valid, but for now, the conjecture that every convergent residual sequence of finite structures admits a modeling limit (stated as Conjecture 1.1 in [2]) remains open.

An alternative approach to the main conjecture addressed in [2] (that a monotone class of graphs admits modeling limits if and only if it is nowhere dense, Conjecture 1.2 in [2]) is proposed in [1], where we claim an even stronger result: every hereditary stable class of structures admits modeling limits.

REFERENCES

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Received August 18, 2025.
2020 *Mathematics Subject Classification.* Primary 03C30, 03C98, 05C99.

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0022-4812/26/9101-0018
DOI:10.1017/jsl.2025.10139

https://doi.org/10.1017/jsl.2025.10139 Published online by Cambridge University Press

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https://doi.org/10.1017/jsl.2025.10139 Published online by Cambridge University Press