

Ramsey theorem for trees with successor operation

Jan Hubička¹

hubicka@kam.mff.cuni.cz

We discuss a new Ramsey-type theorem for trees. On regularly branching trees it can be seen as a common generalization of the Milliken tree theorem and the Carlson–Simpson theorem. The main new concept is the use of successor operation enabling us to work with trees with unbounded branching and identify subtrees that are isomorphic to the original tree. Using this result we can give new direct proofs of recent results by Dobrinen [3, 2], Balko, Chodounský, Hubička, Konečný, Vena [1] and Zucker [4] as well as identify new structures with finite big Ramsey degrees.

This is joint work with Balko, Chodounský, Dobrinen, Konečný, Nešetřil, Vena and Zucker.

- [1] M. BALKO, D. CHODOUNSKÝ, J. HUBIČKA, M. KONEČNÝ, AND L. VENA, *Big Ramsey degrees of 3-uniform hypergraphs are finite*, *Combinatorica*, (2022), pp. 1–14.
- [2] N. DOBRINEN, *The Ramsey theory of Henson graphs*, submitted, arXiv:1901.06660, 2019.
- [3] N. DOBRINEN, *The Ramsey theory of the universal homogeneous triangle-free graph*, *Journal of Mathematical Logic*, 20 (2020), p. 2050012.
- [4] A. ZUCKER, *A note on big Ramsey degrees*, arXiv:2004.13162, (2020).

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