

- LUCIANO SALVETTI, *Equivalence of generics: an introduction and open problems*. Department of Mathematics, University of Toronto, 40 St. George St., Canada.
E-mail: luciano.salvetti@mail.utoronto.ca.

One of the most important open problems in the theory of countable Borel equivalence relations (CBERs) reads ([4]): is every hyper-hyperfinite CBER (i.e., countable increasing union of hyperfinite equivalence relations) hyperfinite? One interesting example of an hyper-hyperfinite CBER which is not known to be hyperfinite is the equivalence of Cohen generics studied by Smythe in [8]. More generally, given a countable transitive model M of (a large fragment of) ZFC and a forcing notion $\mathbb{P} \in M$ we say that two generic filters are equivalent if they produce the same generic extension of M . Combinatorial properties of the poset \mathbb{P} yield dynamical properties of the CBER and viceversa. In this talk we will go over some results about this class of CBERs for well-known forcing notions (Cohen, random, Prikry, etc) and open problems in the literature ([2], [8]). Time permitting, we will also describe a comeagre set of Cohen reals where Cohen equivalence becomes hyperfinite, using an argument that involves Borel combinatorics and avoids the generic hyperfiniteness theorem. This last part will be a section of the author's PhD thesis.

[1] BURSICS, BENCE AND VIDNYÁNSZKY, ZOLTÁN, *Hyperfiniteness on Topological Ramsey Spaces*, *arXiv preprint arXiv:2412.01315*, vol. – (2024), no. –, pp. –.

[2] CALDERONI, FILIPPO AND SINAPOVA, DIMA, *Forcing, genericity and CBERS*, *arXiv preprint arXiv:2503.14811*, vol. – (2025), no. –, pp. –.

[3] KANOVEI, VLADIMIR, SABOK, MARCIN AND ZAPLETAL, JINDŘICH, *Canonical Ramsey theory on Polish spaces*, Cambridge Tracts in Mathematics, no. 202, Cambridge University Press, 2013.

[4] KECHRIS, ALEXANDER S., *The theory of countable Borel equivalence relations*, Cambridge Tracts in Mathematics, no. 234, Cambridge University Press, 2024.

[5] ——— *Classical Descriptive Set Theory*, Graduate Texts in Mathematics, vol. 156, Springer, 1995.

[6] MARKS, ANDREW AND UNGER, SPENCER, *Baire measurable decompositions via matchings*, *Advances in Mathematics*, vol. 289 (2016), no. –, pp. 397–410.

[7] PANAGIOTOPOULOS, ARISTOTELIS AND WANG, ALLISON, *Every CBER is smooth below the Carlson-Simpson generic partition*, *Fundamenta Mathematicae*, vol. 262 (2023), no. 1, pp. 85–103.

[8] SMYTHE, IAN B., *Equivalence of generics*, *Archive for Mathematical Logic*, vol. 61 (2022), no. 5–6, pp. 795–812.