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Title of the talk

Orbit pseudometrics and a universality property of the Gromov-Hausdorff distance

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none

Abstract

In the talk, we consider the notion of Borel reducibility between pseudometrics on standard Borel spaces introduced and studied recently by Cúth, Doucha and Kurka, as well as the notion of an orbit pseudometric, a continuous version of the notion of an orbit equivalence relation. It is well known that the relation of isometry of Polish metric spaces is bireducible with a universal orbit equivalence relation. We prove a version of this result for pseudometrics, showing that the Gromov-Hausdorff distance of Polish metric spaces is bireducible with a universal element in a certain class of orbit pseudometrics.

References

- [1] M. Cúth, M. Doucha and O. Kurka, *Complexity of distances between metric and Banach spaces: Theory of generalized analytic equivalence relations*, to appear in J. Math. Logic, arXiv:1804.11164.
- [2] M. Cúth, M. Doucha and O. Kurka, *Complexity of distances between metric and Banach spaces: Reductions of distances between metric and Banach spaces*, to appear in Israel J. Math., arXiv:2004.11752.
- [3] S. Gao and A. S. Kechris, *On the classification of Polish metric spaces up to isometry*, *Memoirs Amer. Math. Soc.*, Vol. 766, 2003.
- [4] O. Kurka, *Orbit pseudometrics and a universality property of the Gromov-Hausdorff distance*, preprint, arXiv:2204.08375.