

# A dichotomy for countable unions of smooth Borel equivalence relations

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I will present a dichotomy for equivalence relations on Polish spaces that can be expressed as countable unions of smooth Borel equivalence relations. It can be seen as an extension of Kechris–Louveau’s  $\mathbb{E}_1$ -dichotomy for hypersmooth Borel equivalence relations. If time permits, a generalization of this dichotomy, for equivalence relations that can be expressed as countable unions of Borel equivalence relations belonging to certain fixed classes, will also be presented. This is a joint work with Benjamin Miller.

## References

- [1] N. DE RANCOURT AND B. D. MILLER, *A dichotomy for countable unions of smooth Borel equivalence relations*, preprint, arXiv:2105.05362.