Borel structures on the space of left-orderings

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In this talk we will discuss some results on left-orderable groups and their interplay with descriptive set theory. We will see how Borel classification can be used to analyze the space of left-orderings of a given countable group modulo the conjugacy relation. In particular, we will discuss many examples of groups whose space of left-orderings module the conjugacy relation is not standard. Moreover, if G is a nonabelian free group, then the conjugacy relation on its space of left-orders $\mathrm{LO}(G)$ is a universal countable Borel equivalence relation [1]. This is joint work with A. Clay.

References

[1] Filippo Calderoni and Adam Clay. Bull. London Math. Soc., 54 (2022), no. 1, 83 – 94.

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