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A Borel Lemma for o-minimal structures

Patrick Speissegger
McMaster University

Let f be a totally defined real-valued function on the real line. Borel's Lemma states that if f is increasing and everywhere greater than or equal to 1, and if $r > 1$ is fixed, then the set $\{x : f(x + 1/f(x)) \geq rf(x)\}$ has outer measure at most $r/(r - 1)$. Recently, Chris Miller conjectured that a suitably restated version of Borel's Lemma was true in the o-minimal setting. Interestingly, the proof of this version appears to be more elementary for exponential o-minimal structures than for power-bounded ones. (Joint work with Alf Dolich and Chris Miller)