

Lipschitz-free p -space norm

Tomáš Raunig

Charles University, Prague

Let $0 < p \leq 1$, M be a p -metric space and $\mathcal{F}_p(M)$ be its Lipschitz-free p -space (for $p = 1$ this is exactly the standard Lipschitz-free space, for $0 < p < 1$ it is an analogue in the setting of p -metric and p -Banach spaces). We present a new way to express the Lipschitz-free p -norm which, in the case that M is finite, gives a finite algorithm for calculating the p -norm of any element. As consequences, first we give a theorem which demonstrates the fundamental difference between the case $p = 1$ and $p < 1$. Second, we show how this result can be applied to the problem of p -amenability of (p -)metric spaces.

The poster is based on a work in progress with Marek Cúth.