Finitely additive measures and complementability of Lipschitz-free spaces

Marek Cuth *Charles University*

Given a metric space M it is possible to construct a Banach space $F(M)$ in such a way that the metric structure of M corresponds to the linear structure of $F(M)$. This space $F(M)$ is sometimes called the Lipschitz-free space over M. The study of Lipschitz-free spaces is well-motivated: for example, if we knew that $F(\ell_1)$ is complemented in its bidual, it would solve famous open problem of whether every Banach space which is Lipschitz-isomorphic to ℓ_1 is actually linearly isomorphic to ℓ_1.
I will talk about our recent paper with O. Kalenda and P. Kaplický, where we prove that $F(\mathbb{R}^n)$ is complemented in its bidual.