Some Ramsey properties of the Urysohn sphere

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Let X be a separable metric space of diameter 1, which is isometrically universal for this class of spaces (for instance, the Urysohn sphere). It was proved by Nguyen Van Thé and Sauer that X is *oscillation stable*, that is, every real-valued Lipschitz function on X can be made arbitrarily close to a constant on a suitable isometric subcopy of X.

I will show how recent methods from Ramsey theory, developped in the study of *big Ramsey degrees*, allowed us to get extensions of this results for Lipschitz functions defined on finite powers of X. This is a joint work in progress with Adam Bartoš, Tristan Bice, Jan Hubička, and Matěj Konečný.
(joint work with Adam Bartoš, Tristan Bice, Jan Hubička, Matěj Konečný)