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Menger compacta and projective Fraïssé limits

In every dimension n , there exists a canonical compact, metrizable space called the n -dimensional Menger space. For $n = 0$ it is the Cantor space and for $n = \infty$ it is the Hilbert cube. On the first part of the talk I will illustrate how basic notions of classical descriptive set theory naturally generalize into higher homotopical dimensions. In the second part of the talk I will use projective Fraïssé machinery to provide a very canonical construction of the Menger-1 space and show that this object is highly homogeneous.

This is a joint work with Slawomir Solecki.