The Lelek fan and the Poulsen simplex from Fraïssé sequences

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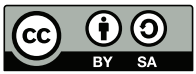
We describe the Lelek fan and the Poulsen simplex in the Fraïssé-theoretic framework in the context of categories enriched over metric spaces, developed by Kubiś, and derive consequences on their universality and homogeneity. Further, using uniqueness of a Fraïssé sequence in a certain category, we show that for every two countable dense subsets of end-points of the Lelek fan there exists a homeomorphism of the Lelek fan mapping one set onto the other. This strengthens a result of Kawamura, Oversteegen, and Tymchatyn.

This is joint work with Wiesław Kubiś.



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