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Abstracts of Short Communications and Posters

Section:

12. Probability and Statistics

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Kolumbán, J., Babes-Bolyai University, Cluj-Napoca, Romania
Invariant sets in Menger spaces
Hutchinson (1981) proved the following: *Let X be a complete metric space and $f_1, \ldots, f_m : X \to X$ be contraction maps. Then there exists a unique compact set $K \subseteq X$ such that $K = \bigcup_{i=1}^{m} f_i(K)$.* If the maps f_i are similitudes, this invariant set K is said to be *self-similar.* Our aim in this work is to generalize the above result for probabilistic metric spaces introduced in 1942 by K. Menger. We also prove some new results on the probabilistic Hausdorff-Pompeiu metric.