

1031-03-62

Su Gao* (sgao@unt.edu), Department of Mathematics, University of North Texas, PO Box 311430, Denton, TX 76203. *Steinhaus sets for finite configurations*. Preliminary report.

For sets $A, S \subseteq \mathbb{R}^2$ we say that S is a Steinhaus set for A if S meets every isometric copy of A at exactly one point. It has been conjectured that if A is finite with at least two elements then no Steinhaus sets exist for A . I will give a survey of the known instances of the conjecture. Also the problem can be considered in \mathbb{R} , where the solutions are sometimes different. The talk is based on a joint paper with Miller and Weiss and on recent work of Xuan. (Received August 01, 2007)