
BEN LI, University of Manitoba
friendship 3-hypergraphs

Let (X, \mathcal{B}) be a set system in which \mathcal{B} is a set of 3-subsets of X . Then (X, \mathcal{B}) is a *friendship 3-hypergraph* if it satisfies the following property: for distinct elements $u, v, w \in X$, there exists a unique fourth element $x \in X$ such that $\{u, v, x\}, \{u, w, x\}, \{v, w, x\} \in \mathcal{B}$. If a friendship 3-hypergraph contains an element $f \in X$ such that $\{f, u, v\} \in \mathcal{B}$ for all $u, v \in X \setminus \{f\}$, then it is called a *universal friend 3-hypergraph* and the element f is called a *universal friend* of the hypergraph.

In this presentation, we will discuss what we know about friendship 3-hypergraphs and universal friend 3-hypergraphs.