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An Erdős-Ko-Rado theorem for finite buildings of type $F_4$. (English) Zbl 1485.51008


Summary: In this paper we determine the largest sets of points of finite thick buildings of type $F_4$ such that no two points of the set are at maximal distance. The motivation for studying these sets comes from [F. Ihringer et al., J. Algebr. Comb. 47, No. 4, 529–541 (2018; Zbl 1394.05136)], where a general Erdős-Ko-Rado problem was formulated for finite thick buildings. The result in this paper solves this problem for points (and dually for symplecta) in finite thick buildings of type $F_4$.

MSC:

51E24 Buildings and the geometry of diagrams
20E42 Groups with a $BN$-pair; buildings
05D05 Extremal set theory
05C35 Extremal problems in graph theory

Keywords:
Erdős-Ko-Rado problem; finite thick buildings

Full Text: DOI

References:


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