
KELDON DRUDGE, Prism Valuations, Toronto

Existence and non-existence results for “Extremal” line sets in $\text{PG}(3, q)$

For a set of lines of $\text{PG}(3, q)$ of a fixed cardinality, what are the maximum and minimum number of intersections between pairs of lines of the set? The question was posed (and answered) by J. Einfeld in 1998. Both his upper and lower bounds are tight, but the sets meeting them have not been fully classified. In this talk we review the known results in the area and add a new example.