

Abstract

On the equivalence of linear sets in a projective space

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(Joint work with Michel Lavrauw)

Linear sets generalise the concept of subgeometries in a projective space, and have many applications in finite geometry, in particular in the theory of blocking sets [3].

Linear sets can be considered as projections of subgeometries as proven by Lunardon, Polito and Polverino [2]. Using this viewpoint, we determine the exact conditions for two linear sets to be projectively equivalent [1]. We discuss the consequences of this theorem in the case of linear sets of rank 3 on a projective line.

References

- [1] M. Lavrauw and G. Van de Voorde. On linear sets on a projective line. To appear in *Des. Codes Cryptogr.*
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- [3] P. Sziklai. On small blocking sets and their linearity. *J. Combin. Theory, Ser. A*, **115** (7) (2008), 1167–1182.