

New constructions of Cameron-Liebler sets of generators in polar spaces

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(Joint work with Maarten De Boeck and Jozefien D'haeseleer)

Cameron-Liebler sets in projective and polar spaces are collections of subspaces having interesting regularity properties, which arise from their close relation to the eigenspaces of the corresponding association schemes, see [1, 2, 3, 5]. In this talk, we will look at the definitions of Cameron-Liebler sets of generators in the finite classical polar spaces. We will give a construction for the first known non-trivial Cameron-Liebler sets of generators in $\mathcal{Q}^+(5, q)$, for all odd q . We will also describe a method to construct non-trivial examples in rank 4 polar spaces from m -ovoids of an embedded generalized quadrangle, and extend this method to polar spaces of higher rank using a new generalization of m -ovoids. The results from this talk can be found in [4].

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References

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