Guangzhou Discrete Mathematics Seminar

Intriguing sets in finite classical polar spaces

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Intriguing sets in finite classical polar spaces are well-studied geometric objects due to their connections with two-character sets and strongly regular graphs. Over the past two decades, various constructions have been given, but nontrivial examples of intriguing sets in polar spaces of higher rank (rank 4 and above) are relatively rare, especially m-ovoids. In this talk, I will present recent results on the constructions of new intriguing sets in finite classical polar spaces. The novelty of these constructions lies in their reliance on special representations of certain almost simple groups.

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seminar series