



Geometries with trialities and no dualities

Rémi Delaby

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Abstract

We explore incidence geometries with three types of elements that admit trialities but no dualities. A triality is a sort of super-symmetry that permutes the types of elements in the geometry in cycles of length three. Although such geometries exhibit fascinating behavior, their construction is challenging, making them rare in the literature. In this talk, we present concrete examples of these geometries.

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