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Old and new results on elementary abelian 2-designs

A 2-design is $elementary\ abelian$ if it admits an elementary abelian group of automorphisms acting sharply transitively on its points.

In this talk I will briefly survey the main results on this topic and I will present some new infinite families of elementary abelian 2-(q^n, kq, λ) designs in which every block is a union of k parallel lines of AG(n, q), the n-dimensional affine geometry over the field of order q.