

Zbl 575.05008

Erdős, Paul; Fowler, Joel C.; Sós, Vera T.; Wilson, Richard M.

On 2-designs. (In English)

J. Comb. Theory, Ser. A **38**, 131-142 (1985). [0097-3165]

The set of b for which there exists a linear space with v points and b lines is studied very sharply, particularly for large v and for v of the form $n^2 + n + 1$. Interesting is an extremal case: if $v = n^2 + n + 1$, $b = n^2 2n + 1$ the space is obtained from a projective plane replacing one of its lines with a near pencil or a projective plane. Conjectures and problems are given too.

G.Ferrero

Classification:

05B05 Block designs (combinatorics)

05B20 (0,1)-matrices (combinatorics)

51A05 General theory of linear incidence geometry

51E30 Other finite incidence structures

Keywords:

linear space; projective plane