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Erdős, Paul; Purdy, George

Extremal problems in combinatorial geometry. (In English)

Graham, R. L. (ed.) et al., Handbook of combinatorics. Vol. 1-2. Amsterdam: Elsevier (North-Holland), 809-874 (1995). [ISBN 0-444-88002-X (set); ISBN 0-444-82346-8 (v. 1); ISBN 0-444-82351-4 (v. 2)]

This interesting paper gives an overview about extremal problems on combinatorial geometry.

Among others the following topics are discussed: Sylvester-Gallai theorems, The Motzkin-Dirac conjecture on the number of Gallai lines. Arrangements, the Graham-Newman problem, the orchard problem, Diracs problem, allowable n -sequences of Goodman and Pollack, Metric problems (Borsuks problem, the Hadwiger-Nelson problem, triangles of different areas, problems involving circles), Helly-type theorems and selected topics (Euclidean Ramsey problems, Heilbronn's problem and other problems).

Several interesting conjectures and many references are included.

H.-D.Hecker (Jena)

Classification:

52C10 Erdos problems and related topics of discrete geometry

00A07 Problem books

Keywords:

extremal problems; combinatorial geometry