

**Goodman, Jacob E.**

**Pseudoline arrangements.** (English) [Zbl 0914.51007](#)

Goodman, Jacob E. (ed.) et al., Handbook of discrete and computational geometry. Boca Raton, FL: CRC Press. CRC Press Series on Discrete Mathematics and its Applications. 83-109 (1997).

A pseudoline is a simple closed curve in the real projective plane whose removal does not disconnect the plane. An arrangement of pseudolines is a labeled set of pseudolines not all passing through the same point such that every pair meeting no more than once i.e. crossing exactly once.

In this paper many results on pseudoline arrangements and related structures are summarized. Section 5.1 deals with basic properties of pseudoline arrangements, and Section 5.2 with related structures, such as arrangements of straight lines, configurations and generalized configurations of points, allowable sequences of permutations, and wiring diagrams. In Section 5.3 stretchability problems and in Section 5.4 some combinatorial results are discussed. Section 5.5 is devoted to topological properties, Section 5.6 to complexity issues of line and pseudoline arrangements, and Section 5.7 to several applications, including sweeping arrangements and visibility graphs.

For the entire collection see [[Zbl 0890.52001](#)].

Reviewer: [A.Kemnitz \(Braunschweig\)](#)

**MSC:**

- [51E20](#) Combinatorial structures in finite projective spaces
- [52A37](#) Other problems of combinatorial convexity
- [52A35](#) Helly-type theorems and geometric transversal theory

Cited in **15** Documents

**Keywords:**

[pseudoline arrangements](#); [stretchabiliy](#); [configurations](#)