

1014-52-1234

Luis Montejano* (luis@math.unam.mx), University of Guerrero, Acapulco, Mexico. *The Colourful Hadwiger Transversal Theorem.*

There are multiplied or colourful versions of Helly and Caratheodory Theorem in the sense of Barani. The aim of this talk is to discuss the corresponding colourful version of the Hadwiger transversal Theorem:

THEOREM. Let $F = \{A_1, \dots, A_n\}$ be a ordered collection of convex sets in the plane. Assume F is the union of C_1, C_2 and C_3 and for every choice $A_i \in C_1, A_j \in C_2$ and $A_k \in C_3$ there is a line transversal to A_i, A_j and A_k consistent with the order. Then, for some $p \in \{1, 2, 3\}$ there is a line transversal to all convex sets of C_p .

Hadwiger Theorem can be generalized, in the sense of Goodman and Pollack, to higher dimensions. So, we shall discuss also the Colourful version of the Goodman-Pollack Hiperplane Transversal Theorem. (Received September 27, 2005)