

AGCO Seminar

Speaker: Ana Laura Trujillo Negrete, CMM, U. de Chile.

Title: Reconstruction of token graphs.

Abstract: Let G be a graph of order $n \geq 2$, and let k be an integer with $k \in \{1, 2, \dots, n-1\}$. The k -token graph $F_k(G)$ of G is the graph whose vertices are all the k -subsets of vertices of G , and two of such k -subsets are adjacent whenever their symmetric difference is an edge of G . We denote by C_4 the 4-cycle and by D_4 the diamond graph (a 4-cycle with a chord). We say that G is a (C_4, D_4) -free graph if G does not contain C_4 nor D_4 as a subgraph.

In 2012 Fabila-Monroy et al. conjectured the following: If G and H are two graphs such that $F_k(G)$ and $F_k(H)$ are isomorphic for some k , then G and H are isomorphic. In this talk we will show this conjecture for the family of (C_4, D_4) -free graphs. Moreover, we will see how this reconstruction problem is related to the automorphism group of token graphs. This is a joint work with Ruy Fabila Monroy.

When: October 26, 15:00 hrs.

Where: Sala de Seminario John Von Neuman, CMM, Beauchef 851, Torre Norte, Piso 7.

