

Seminario de Grafos

Speaker: Alexander Clifton, (CMM)

Title: Drawing Planar Graphs Badly.

Abstract: We study how far one can deviate from optimal behavior when drawing a planar graph on a plane. For a planar graph G , we say that a plane subgraph $H \subseteq G$ is a *plane-saturated subgraph* if adding any edge (possibly with a new vertex) to H would either violate planarity or make the resulting graph no longer a subgraph of G . For a planar graph G , we define the *plane-saturation ratio*, $\text{psr}(G)$, as the minimum value of $\frac{e(H)}{e(G)}$ for a plane-saturated subgraph $H \subseteq G$ and investigate how small $\text{psr}(G)$ can be. While there exist planar graphs where $\text{psr}(G)$ is arbitrarily close to 0, we show that for all twin-free planar graphs, $\text{psr}(G) > 1/16$, and that there exist twin-free planar graphs where $\text{psr}(G)$ is arbitrarily close to $1/16$.

For this week, the seminar will take place in room 432 of DMCC, **USACH**.

Viernes 04 de octubre , 2024 / 10.00-11.00 hrs.

