Colloquium

Graph drawings with crossings: thrackles, musquashes and others.

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PS 308

Abstract: Graph drawings is a classical area of combinatorial geometry. While embeddings of graphs (the drawings with no edge crossings) are very well understood, the theory of drawings in which the edges cross is very incomplete. One remarkable class of such drawings introduced by John Conway in the late 60's is "thrackles", the drawings which are in a sense "completely opposite" to embeddings: every two edges in a thrackle either share a common vertex or a proper crossing; the simplest nontrivial example of a thrackle is a 5-star. Conway's Thrackle Conjecture, still open, asserts that a thrackle on the plane has no more edges than vertices. We will look at the current state of knowledge and the progress in resolving this conjecture.

No preliminary knowledge is necessary.

For Colloquium attendees, refreshments will be served in PS 317 at 3:30 pm