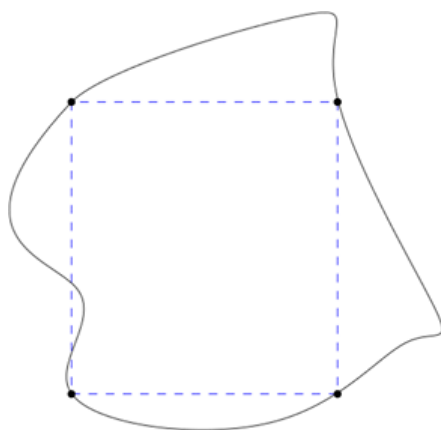


Necklace Splitting and the Inscribed-Square Problem

Undergraduate Math Club
CORNELL UNIVERSITY



SPEAKER

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ABSTRACT

In 1911, Toeplitz conjectured that every loop contains four points which are the vertices of a square. While this is still open, it is known that every loop inscribes a rectangle. A seemingly unrelated result of Alon states that a necklace with d types of beads can be split fairly between r thieves. We sketch a connection between inscribed polygons and necklace splittings and show that every loop inscribes infinitely many rectangles. The set of vertices of these rectangles in fact forms a dense subset of the curve.

MAR 19 at 4:45pm

Malott 532 ★ Refreshments