Poster title and abstract - Frias, Jose

Title:The minimum prism volume for knots and links in the cubic lattice.

Abstract:
An important aspect in the study of DNA topology is to determine which knots can be packed in certain confined volumes. We introduce the study of an invariant for polygonal knots in the simple cubic lattice named the minimum prism volume. This invariant provides a measurement of confinement of a given knot type and complements other known invariants such as the minimum step number and the writhe. We conjecture that the minimum prism volume of the $(2,q)$-torus knot or link is $(2 \times 1 \times 2|q|)$.