MICHAEL SZAFRON, University of Saskatchewan
Using self-avoiding polygons to study DNA-Enzyme Interactions

DNA experiments demonstrate that Type II topoisomerases unknot and unlink DNA in preparation for cellular processes such as replication, but how the enzyme identifies a "knotted region", from which it selects a site to act, remains an open problem. To study this problem, a measure for determining the "knotted region" is required. In this presentation, a new measure for identifying a knotted region in a "pinched" self-avoiding polygon (SAP) and knot-type dependent properties of this measure will be presented.