

Unraveling Knots: Invariants, Homology, and Classification

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The problem of classifying knots lies at the heart of knot theory, and invariants have a crucial role when trying to solve this challenge. In this talk, we will present an overview of several families of knot invariants, ranging from classical polynomial and geometric constructions to more recent homological approaches. We will discuss how these invariants encode geometric and topological information about knots and links, with a particular focus on the properties of Khovanov homology and its geometrization.