

Doodles, twins and polynomials: a planar knot theory

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A doodle is an immersion of a finite number of circles in a 2-manifold without triple intersections. In this talk we will discuss these planar knotted objects in the 2-sphere, as well as a planar version of the braid group, the so-called twin group. We will describe the construction of a polynomial invariant for doodles through a representation of the twin group and Chebyshev polynomials. By construction and behavior, this invariant is an analogue of the Alexander polynomial. This is a work done in collaboration with Bruno Cisneros, Marcelo Flores and Jesús Juyumaya.

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