

Random knots

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Random curves in space and how they are knotted give an insight into the behavior of “typical” knots and links. They have been studied by biologists and physicists in the context of the structure of random polymers. Several randomized models have been suggested and investigated, and many results have been obtained via computational experiment. The talk will begin with a short review of this area.

In work with Hass, Linial, and Nowik, we study random knots based on petal projections, developed by Adams et al. (2012). We have found explicit formulas for the limit distribution of finite type invariants of random knots and links in the Petaluma model. I will discuss these results and sketch proof ideas as time permits.

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