

The OWU Department of Mathematics and Computer Science presents:

# The Physics and Mathematics of Knots

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Abstract: Mathematical knot theory studies possible types of a circular rope tied up to a knot. Mathematicians are interested in quantities which do not change if we move the rope around. They called such a quantity knot invariant. It could be a number, a polynomial, or any other mathematically defined structure. I will explain how some ideas from statistical physics, the Potts and Ising models, can be used to find a famous knot invariant, the Jones polynomial. The talk should be accessible to undergraduates with some mathematical background. Standard calculus courses and some introductory combinatorics of graphs should be enough to understand the most part of the presentation.

Sign up in math lounge for pizza!