

ABSTRACT

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Skein modules have been used for encoding the combinatorics of quantized Wilson lines in Chern-Simons theory. To find order in skein computations, input from representation theory, complex geometry, algebraic geometry, quantum field theory, combinatorics and other areas has been used. I will focus on input from quantum mechanical models and character varieties that I have used in my work, and I will discuss the case of handle bodies and knot complements. An attempt to facilitate skein computations will also be presented.