Recent developments in self-avoiding walks.

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Online talk using Zoom, 3:30 p.m.

Abstract

The canonical problem of calculating the properties of self-avoiding walks (SAWs) has been studied for nearly 80 years. Remarkably little has been proved. In this talk I will give a brief introduction to SAWs, review what is known, and what is widely believed to be true, but has not been proved. Then I will outline three recent calculations: (i) New scaling laws. (ii) The SAW at the theta point. (iii) Attempts to prove the existence of the critical exponent for two-dimensional SAWs. Minimal prior knowledge is assumed.

This talk should be accessible to graduate students.