

Introduction to Schramm-Loewner Evolution (SLE)

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Abstract

The Schramm-Loewner Evolution (SLE_κ) is a one parameter family ($\kappa > 0$) of curves which connect two boundary points of a simply connected domain. It was introduced by Schramm in 1999 as a candidate to describe the scaling limit of the interfaces that arise in discrete models at criticality from statistical mechanics on planar lattices, such as the loop erased random walk and the percolation model. In my talk, I will discuss about the intuition behind the definition of SLE_κ and I will introduce some of its basic properties obtained during the last twenty years. I will also discuss about some recent results obtained in a series of recent research works. Finally, if time permits, I will discuss about some ongoing research results.