

## THE CONVERGENCE OF LOOP-ERASED RANDOM WALK TO SLE(2) IN THE NATURAL PARAMETRIZATION

MICHAEL KOZDRON

The Schramm-Loewner evolution is a one-parameter family of random growth processes in the complex plane introduced by Oded Schramm in 1999. In the past decade, SLE has been successfully used to describe the scaling limits of various two-dimensional lattice models. One of the first proofs of convergence was due to Greg Lawler, Oded Schramm, and Wendelin Werner who gave a precise statement that the scaling limit of loop-erased random walk is SLE with parameter 2. However, their result was only for curves up to reparameterization. There is reason to believe that the scaling limit of loop-erased random walk is SLE(2) with the very specific natural time parameterization that was recently introduced by Greg Lawler and Scott Sheffield, and further studied by Greg Lawler and Wang Zhou. I will describe several possible choices for the parameterization of the discrete curve that should all give the natural time parameterization in the limit, but with the key difference being that some of these discrete time parameterizations are easier to analyze than the others. This talk is based on joint work in progress with Tom Alberts and Robert Masson.