

# Integrability of Schramm-Loewner evolutions via conformal welding of random surfaces

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## Abstract

The Schramm-Loewner evolution (SLE) is a one-parameter family of random fractal curves which describe the scaling limit of statistical physics models. We derive an explicit formula for the moments of the derivative of a particular uniformizing conformal map associated with an SLE. Our proof is based on conformal welding of Liouville quantum gravity surfaces along with integrability results from Liouville conformal field theory.

Joint work with Morris Ang and Xin Sun.