

DEFINING SLE IN MULTIPLY CONNECTED DOMAINS USING THE BROWNIAN LOOP MEASURE

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We give a way to define SLE for $\kappa \leq 4$ by giving its Radon-Nikodym derivative with respect to SLE in simply connected domain. The definition is easy but it leaves open some questions about finiteness and smoothness of the partition function. We show how one can analyze this in the case of the annulus and discuss the Radon-Nikodym derivative of reverse radial SLE with respect to whole plane SLE. I will include ongoing work with Shawn Drenning and Laurie Field. The arguments uses some recent ideas of Dapeng Zhan.