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On the continuity of SLE_κ curves in κ .

The Schramm-Loewner evolution with parameter $\kappa > 0$ (SLE_κ) is a family of conformally invariant random fractal curves defined by using a standard Brownian motion times the square-root of κ as driving term for the Loewner differential equation. A natural question that seems to have occurred to several researchers is whether the SLE_κ Loewner chains are almost surely simultaneously generated by curves which change continuously when κ varies in an interval and the Brownian motion sample is kept fixed. Indeed, there are examples of Loewner chains with deterministic driving terms strictly more regular than Brownian motion that do not have this property. We will discuss recent joint work with S. Rohde and C. Wong answering this question in the positive, at least for a range of κ . Time permitting, we will also describe some related quantitative results. (Received February 14, 2012)