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Kyle Kinneberg* (kk43@rice.edu). *Hölder domains, John domains, and conformal dimension.*

Hölder domains and John domains are two classes of planar sets that have been studied closely in classical potential theory and conformal mapping. They have also arisen naturally in complex dynamics through iteration of polynomials and rational maps. In Rohde and Schramm's foundational work on SLE, they show that the unbounded complementary component of an SLE_κ trace is a Hölder domain, almost surely, if $\kappa \neq 4$. In this talk, I'll discuss a deterministic "converse" relationship, where Hölder domains produce driving terms with regularity similar to that of Brownian motion through the Loewner correspondence. Then, motivated by some questions about the quasiconformal geometry of SLE curves, I'll discuss the conformal dimension problem. As a toy case, we will see that boundaries of John domains have conformal dimension equal to 1. (Received February 07, 2016)