

Generalized Multifractality of Whole-Plane SLE

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Summary

We introduce a generalized notion of integral means spectrum for unbounded conformal maps, depending on two moments, giving access to logarithmic coefficients. We study this (averaged) generalized integral means spectrum for unbounded whole-plane SLE. The usual SLE multifractal spectrum, predicted by the speaker in 2000 and proved in expectation by Beliaev and Smirnov in 2005 and almost surely by Gwynne, Miller and Sun in 2014, crosses over to a novel spectrum along phase transition lines in the plane of moment orders. A conjecture is also proposed for the universal generalized multifractal spectrum, which is proved for a certain range of moments.

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