

Convergence of percolation on random quadrangulations

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Let Q be a uniformly random quadrangulation with simple boundary decorated by a critical ($p=3/4$) face percolation configuration. We prove that the chordal percolation exploration path on Q between two marked boundary edges converges in the scaling limit to SLE_6 on the Brownian disk (equivalently, a Liouville quantum gravity surface). The topology of convergence is the Gromov-Hausdorff-Prokhorov-uniform topology, the natural analog of the Gromov-Hausdorff topology for curve-decorated metric measure spaces. Our method of proof is robust and, up to certain technical steps, extends to any percolation model on a random planar map which can be explored via peeling.

References

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