

# BI-INFINITE GEODESICS OF FIRST PASSAGE PERCOLATION ON SOME INFINITE GRAPHS

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We consider the first passage percolation (FPP) on infinite graphs.

Benjamini and Tessera [BT16] showed that if an infinite connected simple graph has a Morse bi-infinite geodesic, then, under some conditions for the distribution of the weight, there exists a bi-infinite geodesic a.s. Their result is applicable to hyperbolic graphs.

I will talk about FPP on a special class of non-hyperbolic graphs. I will state that there does not exist bi-infinite geodesic a.s. on a certain class of non-hyperbolic graphs containing the one-sided standard 2-dimensional Sierpinski gasket graph and on the other hand there exists bi-infinite geodesic a.s. on another class of non-hyperbolic graphs. Our assumptions for the weight distribution are minimal.

## REFERENCES

- [BT16] I. Benjamini and R. Tessera, First passage percolation on a hyperbolic graph admits bi-infinite geodesics. *Electron. Commun. Probab.* 22 (2017), no. 14, 1-8.