

**Elias, Olof; Tykesson, Johan**

**Visibility in the vacant set of the Brownian interacements and the Brownian excursion process.** (English) [Zbl 07116306](#)

*ALEA*, *Lat. Am. J. Probab. Math. Stat.* 16, No. 2, 1007-1028 (2019).

Summary: We consider the Brownian interacements model in Euclidean space, introduced by *A.-S. Sznitman* [*Bull. Braz. Math. Soc. (N.S.)* 44, No. 4, 555–592 (2013; [Zbl 1303.60022](#))]. We give estimates for the asymptotics of the visibility in the vacant set. We also consider visibility inside the vacant set of the Brownian excursion process in the unit disc and show that it undergoes a phase transition regarding visibility to infinity as in [*I. Benjamini et al.*, *ALEA*, *Lat. Am. J. Probab. Math. Stat.* 6, 323–342 (2009; [Zbl 1276.82012](#))]. Additionally, we determine the critical value and that there is no visibility to infinity at the critical intensity.

Reviewer: [Reviewer \(Berlin\)](#)

**MSC:**

**60K35** Interacting random processes; statistical mechanics type models; percolation theory  
**82B43** Percolation

**Keywords:**

[Brownian interacements](#); [Brownian excursions](#); [visibility](#)

**Full Text:** [Link](#) [arXiv](#)

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