

# Literature

## Competing first passage percolation on $\mathbb{Z}^d$

The model was introduced in [11], where it was also shown that two types with equal intensity can coexist in  $d = 2$ . This is generalized to higher dimensions (and more general passage time distributions) independently in [9] and [13]. A partial result concerning non-coexistence is proved in [12] and the full coexistence conjecture is proved in the half-plane in [2]. Further references can be found in the survey [7].

## Competing first passage percolation on the configuration model

Exponential passage times are treated in [8] (power law with infinite variance), [3] (finite variance) and [4] (constant degrees). Constant passage times are treated in [6, 14].

## Other models

A two-type version of the contact process was introduced in [19] and has been further studied in [17, 18, 21]. Other models for competition on  $\mathbb{Z}^d$  include e.g. [1] (a combination of first passage percolation and bootstrap percolation), [15] (a model where sites can switch type) [16] (competition driven by random walks) and [20] (competing first passage percolation with mutation). A preferential attachment model with two types is analyzed in [5].

# References

- [1] Ahlberg, D., Griffiths, S., Janson, S. and Morris, R. (2017): Competition in growth and urns, *Rand. Struct. Alg.*, to appear.
- [2] Ahlberg, D., Deijfen, M. and Hoffman, C. (2018): The two-type Richardson model in the half-plane, preprint, arxiv:1808.10796.
- [3] Ahlberg, D., Deijfen, M. and Janson, S. (2017): Competing first passage percolation on random graphs with finite variance degrees, preprint, arxiv:1711.02902.
- [4] Antunovic, T., Dekel, Y., Mossel, E. and Peres, Y. (2017): Competing first passage percolation on random regular graphs, *Rand. Struct. Alg.* **50**, 534-583.
- [5] Antunovic, T., Mossel, E. and Racz, M. (2016): Coexistence in preferential attachment networks, *Comb. Probab. Comp.* **25**, 797-822).
- [6] Baroni, E., Komjathy, J. and van der Hofstad, R. (2015): Fixed speed competition on the configuration model with infinite variance degrees: unequal speeds, *Electr. J. Probab.* **20**, 1-48.
- [7] Deijfen, M. and Häggström, O. (2007): The pleasures and pains of studying the two-type Richardson model, in *Analysis and Stochastics of Growth Processes and Interface Models*, Oxford University Press, pp 39-54.
- [8] Deijfen, M. and van der Hofstad, R. (2016): The winner takes it all, *Ann. Appl. Probab.* **26**, 2419-2453.

- [9] Garet, O. and Marchand, R. (2005): Coexistence in two-type first-passage percolation models, *Ann. Appl. Probab.* **15**, 298-330.
- [10] Garet, O. and Marchand, R. (2007): First-passage competition with different speeds: positive density for both species is impossible, *Electron. J. Probab.* **13**, 2118-2159.
- [11] Häggström, O. and Pemantle, R. (1998): First passage percolation and a model for competing spatial growth, *J. Appl. Probab.* **35**, 683-692.
- [12] Häggström, O. and Pemantle, R. (2000): Absence of mutual unbounded growth for almost all parameter values in the two-type Richardson model, *Stoch. Proc. Appl.* **90**, 207-222.
- [13] Hoffman, C. (2005): Coexistence for Richardson type competing spatial growth models, *Ann. Appl. Probab.* **15**, 739-747.
- [14] Komjathy, J. and van der Hofstad, R. (2015): Fixed speed competition on the configuration model with infinite variance degrees: equal speeds, preprint, arxiv:1503.09046.
- [15] Kordzakhia, G. and Lalley, S. (2005): A two-species competition model on  $\mathbb{Z}^d$ , *Stoch. Proc. Appl.* **115**, 781-796.
- [16] Kurkova, I., Popov, S. and Vachkovskaia, M. (2004): On infection spreading and competition between independent random walks, *Electr. J. Probab.* **9**, 293-315.
- [17] Mountford, T. and Valesin, D. (2016): Functional central limit theorem for the interface of the multitype contact process, *ALEA* **13**, 481-519.
- [18] Mountford, T., Pantoja, P. and Valesin, D. (2018): The asymmetric multitype contact process, *Stoch. Proc. Appl.*, to appear.
- [19] Neuhauser, C. (1992): Ergodic theorems for the multitype contact process, *Probab. Theory Related Fields* **91**, 467-506.
- [20] Sidoravicius, V. and Stauffer, A. (2016): Multi-particle diffusion limited aggregation, arxiv:1603.03218.
- [21] Valesin, D. (2010): Multitype contact process on  $\mathbb{Z}$ : extinction and interface, *Electron. J. Probab.* **15**, 2220-2260.