

Percolation and related topics II

Exercises will be taken mostly from my book *Probability on Graphs*, published by Cambridge University Press in 2010, and available online at

<http://www.statslab.cam.ac.uk/~grg/books/pgs.html>

This set of exercises is extracted from the ends of Chapters 3, 4, and 5.

Handout for 4 November. Scripts to be handed in to lecturer (or via pigeon-hole) by **12 noon on 11 November**. Class to be confirmed, but provisionally timetabled for Wednesday 17 November at 3pm in MR12.

1. *Russo's formula*. Exercise 4.9.
2. *Using sharp-threshold*. Exercise 4.11. This is an example of influence theorems in action.
3. *Word percolation*. Exercise 3.11.
4. *Largest subcritical cluster*. Exercise 5.2. Give some thought to the corresponding question in the supercritical case.
5. *RSW theory*. Read up Section 5.5 the on RSW lemma (I will cover the proofs in lectures), and do Exercise 5.4.