## Monday July 8

1) CN 1: Connectivity and Component Size in $\mathrm{G}_{\mathrm{n}, \mathrm{p}}$ And Random Regular Graphs.
2) RW 1: Exact sampling from the stationary distribution: Cesaro mixing and stationary times; separation distance and strong stationary times
3) CN 2 : Modularity in $\mathrm{G}_{\mathrm{n}, \mathrm{p}}$

Exercises: CN 1 (Bruce)

## Tuesday July 9

4) RW 2: Mixing times and hitting times; Cover times and the spanning tree bound
5) CN 3: The Preferential Attachment Model
6) RW 3: Spectral techniques; relaxation times; bottleneck ratios

Exercises RW 1-3. (Louigi)

## Wednesday July 10

7) RW 4: Spanning Trees 1 : : the Aldous-Broder algorithm and cover times
8) CN 4: Giant Component in Graphs with a fixed degree sequence I
9) RW 5: Spanning trees 2: Wilson's algorithm and hitting times; connection with the algorithmic Lovasz Local Lemma

No exercises (Excursion)

## Thursday July 11

10) CN 5: Cliques, Stable Sets, and Colourings in Random Graphs.
11) RW 6: Hitting times of large sets 1
12) CN 6: Components in Graphs with Fixed Degree Sequences II

Exercises on RW 6-7 (Perla)

## Friday July 12

13) RW: 7: Hitting times of large sets II
14) CN 7: The differential equation model
15) RW 8: Starr's maximal inequality

Exercises on CN7 (Dieter)

## Monday July 15

16) CN8: Triangle-free process I
17) RW 9: Hitting time cutoff
18) CN 9: Triangle-free process II

Exercises on CN 8-9 (Simon)

## Tuesday July 16

19) CN 10: Graphs without Induced Subgraphs I
20) RW 10: Characterization of cutoff for reversible chains
21) CN 11: Graphs without Induced Subgraphs II

Exercises on CN 10-11 (Bruce)

## Wednesday July 16

22) RW 11: Cutoff on trees
23) CN 12: Random Graphs without Induced Minors I
24) RW 12: Surprise probabilities

Exercises on CN 12 (Colin)

## Thursday July 17

25) RW 13: Mixing time of random walk on random random graphs
26) CN 13: Random Graphs without Induced Minors II
27) RW 14: Nonbacktracking random walk

Exercises on RW 11-14 (Anna)

## Friday July 18

28) RW 15: Cutoff for nonbacktracking random walk on random graphs
29) CN 14: The Mixing time of the random walk on $\mathrm{G}_{\mathrm{n}, \mathrm{p}}$
30) CN 15: The Chromatic threshold of graphs

No exercises (last day)

