Random Graphs and Complex Networks

Preliminary programme

April 15, Friday	Lecture 1: Complex Networks — Introduction Exercise session
April 16, Saturday	Lecture 2: Probabilistic background (stochastic ordering, coupling) Exercise session
April 18, Monday	Lecture 3: Branching processes Exercise session
April 19, Tuesday	Lecture 4: Erdős-Rényi random graph Exercise session
April 20, Wednesday	Lecture 5: Erdős-Rényi and Generalised random graphs Exercise session
April 21, Thursday	Lecture 6: Preferential attachment model ($m = 1$) Exercise session
April 22, Friday	Lecture 7: Preferential attachment model ($m = 1$) Exercise session
April 23, Saturday	Lecture 8: Research lecture (including Configuration Model) Discussion (oral exam)

Each lecture will take 2×45 mins, and each exercise session will take 2×45 mins.

In an exercise session students will be divided into 2 or 3 groups, and will be offered to solve 2 easy problems (same for everybody) and 1 more involved problem (different in different groups). Students will be given 1 hour to solve the problems and will be assisted. In the remaining 30 mins one student from each group will present the solution to the difficult problem on the blackboard (in English).

In the oral exam, students are allowed to use the book and will be asked to explain some of the material discussed in the lectures (in English).