

Preface

The following notes grew out of the graduate course “Special topics in probability”, which I gave at ETH Zurich during the Spring term 2011. One of the objectives was to explore the links between occupation times, Gaussian free fields, Poisson gases of Markovian loops, and random interlacements. The stimulating atmosphere during the live lectures was an encouragement to write a fleshed-out version of the handwritten notes, which were handed out during the course. I am immensely grateful to Pierre-François Rodriguez, Artëm Sapozhnikov, Balázs Ráth, Alexander Drewitz, and David Belius, for their numerous comments on the successive versions of these notes. Support by the European Research Council through grant ERC-2009-AdG 245728-RWPERCRI is thankfully acknowledged.