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Topics in Markov Chain Theory and Simulation Optimisation

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan
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in het openbaar te verdedigen
ten overstaan van de promotiecommissie
van de Faculteit der Economische Wetenschappen en Bedrijfskunde
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De Boelelaan 1105

door

Joost Berkhout

geboren te Alkmaar

promotor: prof.dr. B. F. Heidergott

PREFACE

“Don’t judge each day by the harvest you reap but by the seeds that you plant.”
R. L. Stevenson

Over the past years I have dedicated myself to research in the fields of Markov chains and simulation optimisation. This thesis contains an elaboration of that research. The thesis would not have been possible to write without the generous support of a number of people and cats.

First of all, I would like to express my sincere gratitude to my promoter Bernd Heidergott. After my Master thesis Bernd encouraged me to pursue a PhD degree which I have never regretted. Although Bernd was very busy with “much more important stuff” he always found time to discuss research and made my PhD journey a pleasant one. It was a great pleasure working with Bernd and I look back fondly on our inspiring conversations including the small side steps to more philosophical matters and wise tai chi lessons. In the future, I sincerely hope to have the chance to keep working together and maybe address some of the open questions that we forwarded to the “Institute of Further Research” (a self-proclaimed fictive institute that keeps track of all the identified open problems and rough ideas of how to approach them). Further, I’m very much obliged to all my co-authors during my PhD trajectory, the PhD reading committee for all their effort and Ad Ridder for reading parts of the manuscript.

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On a more personal level I want to thank my loving parents Corry and Arnold, brother and nursing hero Tim, sister in law (and research pictures admirer) Marleen and fabulous Wally. Further I would like to thank Karin, Lara, Ton and Jochim for their support. Also I am very happy with Minoes and Dikkie Dik for their essential assistance during research periods at home by showing the true meaning of *living in the present moment*.

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Joost Berkhout, Alkmaar, March 2016.

