

Finite Markov Chains and Algorithmic Applications

OLLE HÄGGSTRÖM

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Based on a lecture course given at Chalmers University of Technology, this book is ideal for advanced undergraduate or beginning graduate students. The author first develops the necessary background in probability theory and Markov chains before applying it to study a range of randomized algorithms with important applications in optimization and other problems in computing. Amongst the algorithms covered are the Markov chain Monte Carlo method, simulated annealing, and the recently developed Propp–Wilson algorithm. This book will appeal not only to mathematicians, but also to students of statistics and computer science. The subject matter is introduced in a clear and concise fashion and the numerous exercises included will help students to deepen their understanding.

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Edited by Professor C. M. SERIES, Mathematics Institute, University of Warwick, Coventry CV4 7AL, United Kingdom

with assistance from

J. D. Gibbon (*Imperial*)

E. Rees (*Edinburgh*)

M. Liebeck (*Imperial*)

P. Olver (*Minnesota*)

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